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Mathematics 2–5

Contents

Subject: Mathematics
Goal Strand: Number and Numerical Operations
RIT Score Range: Below 161

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• Counts numbers 0-20*	• Counts 1 to 10 objects • Counts numbers 0-20* • Identifies missing numbers in a series through 100 • Counts ordinal numbers (1st to 10th)
Number Sense - Understand Place Value	**Number Sense - Understand Place Value**
	• Writes whole numbers in standard and expanded form through the tens
Number Sense - Recognize and Use U.S. Currency	**Number Sense - Recognize and Use U.S. Currency**
	• Adds money vertically with no regrouping*
Number Sense - Compare and Order Numbers	**Number Sense - Compare and Order Numbers**
	• Orders whole numbers less than 10*
Number Sense - Represent Equivalence of Numbers	**Number Sense - Represent Equivalence of Numbers**
Number Sense - Apply Number Theory Concepts	**Number Sense - Apply Number Theory Concepts**
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• Uses models to construct whole number addition facts with addends through 10* • Uses models to calculate whole number sums through 99*	• Uses a number line to construct addition facts with sums through 20 (whole numbers)* • Uses models to calculate whole number sums through 99* • Uses models to calculate whole number sums through 999* • Uses models to construct subtraction facts with differences through 10 (whole numbers)* • Uses models to calculate differences through 100 (whole numbers)*
Numerical Operations - Add and Subtract	**Numerical Operations - Add and Subtract**
• Adds two 1-digit numbers with sums to 10 in horizontal format	• Adds two 1-digit numbers with sums to 10 in horizontal format • Adds two 1-digit numbers with sums to 10 in vertical format • Adds two 1-digit numbers with sums between 10 and 19 in horizontal format • Adds two 1-digit numbers with sums between 10 and

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	19 in vertical format* • Adds multiple 1-digit numbers • Uses strategies for addition facts (e.g., compatible numbers, counting on, doubles, neighbors, making tens) • Adds 1-digit to multiple-digit number with no regrouping* • Adds 2-digit numbers with no regrouping • Adds 2-digit to 3-digit number, with no regrouping, with sums under 1000* • Subtracts two 1-digit numbers horizontally • Subtracts a 1-digit number from a 2-digit number that is less than 20 (whole numbers only) • Subtracts two 1-digit numbers vertically • Uses strategies for subtraction facts (e.g., counting back, one less, two less)* • Subtracts a 2-digit number from a 2-digit number, with no regrouping
Numerical Operations - Multiply and Divide	**Numerical Operations - Multiply and Divide**
	• Instantly recalls basic multiplication facts where one factor is 0-5 and the other factor is 0-12
Estimation	**Estimation**
New Vocabulary: none	*New Vocabulary:* add, double, numeral, sum
New Signs and Symbols: + addition, = is equal to, □ variable	*New Signs and Symbols:* $ dollar sign, × multiplication, – subtraction

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Subject: Mathematics
Goal Strand: Number and Numerical Operations
RIT Score Range: 161 - 170

Skills and Concepts to Enhance Below 161	Skills and Concepts to Develop 161 - 170	Skills and Concepts to Introduce 171 - 180
Number Sense - Construct Meaning	**Number Sense - Construct Meaning**	**Number Sense - Construct Meaning**
• Counts numbers 0-20*	• Counts 1 to 10 objects • Counts numbers 0-20* • Identifies missing numbers in a series through 100 • Counts ordinal numbers (1st to 10th)	• Identifies the numerical and written name for whole numbers 21 to 100 (e.g., 62 is sixty-two, and vice versa)* • Identifies the numeral and written name for whole numbers 101 to 999 (e.g., 342 is three hundred forty-two, and vice versa)* • Identifies the numeral and written name for ordinal numbers 1st to 20th (e.g., 1st is first, and vice versa)* • Counts numbers 0-100 • Counts numbers 0-1000* • Identifies missing numbers in a series through 100 • Counts by 2's to 100 • Counts and writes by 5's* • Counts backwards from a given number (given number greater than 10)* • Identifies a whole number that comes between 2 given numbers (20 to 100)* • Counts ordinal numbers (first to tenth) • Identifies the ordinal number that comes before, between, or after a given ordinal number (first to tenth)* • Represents 1/2 with a diagram or model
Number Sense - Understand Place Value	**Number Sense - Understand Place Value**	**Number Sense - Understand Place Value**
	• Writes whole numbers in standard and expanded form through the tens	• Counts objects that are grouped into tens and ones • Identifies the place value and value of each digit in whole numbers through the tens place*
Number Sense - Recognize and Use U.S. Currency	**Number Sense - Recognize and Use U.S. Currency**	**Number Sense - Recognize and Use U.S. Currency**
	• Adds money vertically with no regrouping*	• Adds money vertically with no regrouping* • Identifies the value of a collection of coins to $1.00 (with pictures of coins) • Identifies the value of a collection of coins and bills to $10.00 by "counting on" (with picture of money) • Uses cent sign and dollar sign when appropriate* • Connects money with place value

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Number Sense - Compare and Order Numbers	Number Sense - Compare and Order Numbers	Number Sense - Compare and Order Numbers
	• Orders whole numbers less than 10*	• Compares whole numbers through100* • Compares whole numbers through 999 • Orders sets of objects 0-10* • Orders sets of objects 0-20*
Number Sense - Represent Equivalence of Numbers	**Number Sense - Represent Equivalence of Numbers**	**Number Sense - Represent Equivalence of Numbers**
		• Writes equivalent forms of whole number expressions (e.g., 15 + 5 = 10 + 10) • Identifies equivalent fractions using visual representations*
Number Sense - Apply Number Theory Concepts	**Number Sense - Apply Number Theory Concepts**	**Number Sense - Apply Number Theory Concepts**
Numerical Operations - Develop Meanings	**Numerical Operations - Develop Meanings**	**Numerical Operations - Develop Meanings**
• Uses models to construct whole number addition facts with addends through 10* • Uses models to calculate whole number sums through 99*	• Uses a number line to construct addition facts with sums through 20 (whole numbers)* • Uses models to calculate whole number sums through 99* • Uses models to calculate whole number sums through 999* • Uses models to construct subtraction facts with differences through 10 (whole numbers)* • Uses models to calculate differences through 100 (whole numbers)*	• Uses a number line to construct addition facts with sums through 20 (whole numbers)* • Uses models to calculate whole number sums through 999* • Uses models to calculate differences through 100 (whole numbers)* • Uses models to calculate differences through 1000 (whole numbers)* • Recognizes addition and subtraction fact families through 18 • Demonstrates an understanding that vertical and horizontal representations are equivalent
Numerical Operations - Add and Subtract	**Numerical Operations - Add and Subtract**	**Numerical Operations - Add and Subtract**
• Adds two 1-digit numbers with sums to 10 in horizontal format	• Adds two 1-digit numbers with sums to 10 in horizontal format • Adds two 1-digit numbers with sums to 10 in vertical format • Adds two 1-digit numbers with sums between 10 and 19 in horizontal format • Adds two 1-digit numbers with sums between 10 and 19 in vertical format* • Adds multiple 1-digit numbers • Uses strategies for addition facts (e.g., compatible numbers, counting on, doubles, neighbors, making tens) • Adds 1-digit to multiple-digit number with no regrouping* • Adds 2-digit numbers with no regrouping • Adds 2-digit to 3-digit number, with no regrouping, with sums under 1000*	• Uses strategies for addition facts (e.g., compatible numbers, counting on, doubles, neighbors, making tens) • Adds 2-digit to 3-digit number, with no regrouping, with sums under 1000* • Adds two or three 2-digit number with regrouping • Adds 1-, 2-, and/or 3-digit numbers with sums under 100* • Adds 3-digit numbers with no regrouping • Adds 3-digit numbers, with regrouping, with sums under 1000 • Adds multiple-digit numbers, with no regrouping, with sums over 1000* • Subtracts a 1-digit number from a 2-digit number that is less than 20 (whole numbers only) • Uses strategies for subtraction facts (e.g., counting back, one less, two less)*

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	• Subtracts two 1-digit numbers horizontally • Subtracts a 1-digit number from a 2-digit number that is less than 20 (whole numbers only) • Subtracts two 1-digit numbers vertically • Uses strategies for subtraction facts (e.g., counting back, one less, two less)* • Subtracts a 2-digit number from a 2-digit number, with no regrouping	• Subtracts a 1-digit number from a 2-digit number with no regrouping, vertically • Subtracts a 1-digit number from a multiple-digit number* • Subtracts a 2-digit number from a 2-digit number, with no regrouping • Subtracts 2- and/or 3-digit numbers with no regrouping • Adds 1-digit numbers with sums to 18 (with parentheses)
Numerical Operations - Multiply and Divide	**Numerical Operations - Multiply and Divide**	**Numerical Operations - Multiply and Divide**
	• Instantly recalls basic multiplication facts where one factor is 0-5 and the other factor is 0-12	• Instantly recalls basic multiplication facts where one factor is 0-5 and the other factor is 0-12 • Multiplies basic facts to 10 x 10 vertically
Estimation	**Estimation**	**Estimation**
New Vocabulary: none	*New Vocabulary:* add, double, numeral, sum	*New Vocabulary:* before, between, count, counting order, dime, dollar sign, eighth, eleventh, fact family, fifth, greater, greater than, hundred, largest, ninth, penny, seventh, tenth, thousand
New Signs and Symbols: + addition, = is equal to, □ variable	*New Signs and Symbols:* $ dollar sign, × multiplication, – subtraction	*New Signs and Symbols:* ( ) order of operations, ¢ cent sign

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Subject: Mathematics
Goal Strand: Number and Numerical Operations
RIT Score Range: 171 - 180

Skills and Concepts to Enhance 161 - 170	Skills and Concepts to Develop 171 - 180	Skills and Concepts to Introduce 181 - 190
Number Sense - Construct Meaning	**Number Sense - Construct Meaning**	**Number Sense - Construct Meaning**
• Counts 1 to 10 objects • Counts numbers 0-20* • Identifies missing numbers in a series through 100 • Counts ordinal numbers (1st to 10th)	• Identifies the numerical and written name for whole numbers 21 to 100 (e.g., 62 is sixty-two, and vice versa)* • Identifies the numeral and written name for whole numbers 101 to 999 (e.g., 342 is three hundred forty-two, and vice versa)* • Identifies the numeral and written name for ordinal numbers 1st to 20th (e.g., 1st is first, and vice versa)* • Counts numbers 0-100 • Counts numbers 0-1000* • Identifies missing numbers in a series through 100 • Counts by 2's to 100 • Counts and writes by 5's* • Counts backwards from a given number (given number greater than 10)* • Identifies a whole number that comes between 2 given numbers (20 to 100)* • Counts ordinal numbers (first to tenth) • Identifies the ordinal number that comes before, between, or after a given ordinal number (first to tenth)* • Represents 1/2 with a diagram or model	• Identifies the numeral and written name for whole numbers 101 to 999 (e.g., 342 is three hundred forty-two, and vice versa)* • Identifies the numeral and written name for whole numbers to 1000 to 9999 (e.g., 3456 is three thousand, four hundred fifty-six, and vice versa) • Identifies the numeral and written name for whole numbers 10,000 to 100,000 • Identifies the number that is "1 more than" a given number* • Identifies the number that is "1 less than" a given number • Counts numbers 0-1000* • Counts and writes by 3's* • Counts and writes by 4's* • Counts and writes by 6's, 7's, 8's, or 9's* • Counts ordinal numbers (first to tenth) • Identifies the ordinal number that comes before, between, or after a given ordinal number (first to tenth)* • Represents 1/4 with a diagram or model* • Represents 3/4 with a diagram or model* • Identifies equal parts by using models • Identifies 1/2 from a region or set • Identifies 1/4 from a region or set • Identifies 2/3 or 3/3 from a region or set* • Identifies tenths from a region or set* • Identifies eighths from a region or set • Identifies a fraction (denominators other than 2, 3, 4, 8, 10) from a region or set
Number Sense - Understand Place Value	**Number Sense - Understand Place Value**	**Number Sense - Understand Place Value**
• Writes whole numbers in standard and expanded form through the tens	• Counts objects that are grouped into tens and ones • Identifies the place value and value of each digit in whole numbers through the tens place*	• Counts objects that are grouped into tens and ones • Identifies whole numbers under 100 given place value terms (e.g., 3 tens and 4 ones = 34) • Identifies the place value and value of each digit in

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		whole numbers through the tens place* • Identifies the place value and value of each digit in whole numbers through the hundreds place • Identifies the place value and value of each digit in whole numbers through the thousands • Identifies the place value and value of each digit in whole numbers through the hundred thousands • Applies base ten place value concepts to solve problems using decimals*
Number Sense - Recognize and Use U.S. Currency	**Number Sense - Recognize and Use U.S. Currency**	**Number Sense - Recognize and Use U.S. Currency**
• Adds money vertically with no regrouping*	• Adds money vertically with no regrouping* • Identifies the value of a collection of coins to $1.00 (with pictures of coins) • Identifies the value of a collection of coins and bills to $10.00 by "counting on" (with picture of money) • Uses cent sign and dollar sign when appropriate* • Connects money with place value	• Identifies the value of a collection of coins to $1.00 (without picture of coins) • Adds money with regrouping • Identifies the value of a collection of coins and bills to $10.00 by "counting on" (with picture of money) • Identifies the value of a collection of coins and bills to $100.00 by "counting on"* • Finds equivalent combinations of coins with the same value* • Combines a collection of coins and identifies the correct notation • Makes change to $1.00 by "counting on" or subtracting
Number Sense - Compare and Order Numbers	**Number Sense - Compare and Order Numbers**	**Number Sense - Compare and Order Numbers**
• Orders whole numbers less than 10*	• Compares whole numbers through100* • Compares whole numbers through 999 • Orders sets of objects 0-10* • Orders sets of objects 0-20*	• Compares whole numbers through 999 • Compares whole numbers through 9999 • Orders sets of objects 0-20* • Orders whole numbers less than 100 • Orders whole numbers less than 1000* • Compares and orders decimals to the hundredths place (same number of digits after decimal)
Number Sense - Represent Equivalence of Numbers	**Number Sense - Represent Equivalence of Numbers**	**Number Sense - Represent Equivalence of Numbers**
	• Writes equivalent forms of whole number expressions (e.g., 15 + 5 = 10 + 10) • Identifies equivalent fractions using visual representations*	• Counts and converts to dozens with models* • Writes equivalent forms of whole numbers 11 to 20 using addition (e.g., 14 = 7 + 7)* • Writes equivalent forms of whole numbers using multiplication (e.g., 12 = 4 x 3 = 2 x 6 = 2 x 2 x 3)* • Converts to dozens without models
Number Sense - Apply Number Theory Concepts	**Number Sense - Apply Number Theory Concepts**	**Number Sense - Apply Number Theory Concepts**
		• Determines whether a set of objects has an odd or even number of elements • Distinguishes between odd and even numbers
Numerical Operations - Develop Meanings	**Numerical Operations - Develop Meanings**	**Numerical Operations - Develop Meanings**
• Uses a number line to construct addition facts with	• Uses a number line to construct addition facts with	• Uses a number line to construct subtraction facts with

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sums through 20 (whole numbers)* • Uses models to calculate whole number sums through 99* • Uses models to calculate whole number sums through 999* • Uses models to construct subtraction facts with differences through 10 (whole numbers)* • Uses models to calculate differences through 100 (whole numbers)*	sums through 20 (whole numbers)* • Uses models to calculate whole number sums through 999* • Uses models to calculate differences through 100 (whole numbers)* • Uses models to calculate differences through 1000 (whole numbers)* • Recognizes addition and subtraction fact families through 18 • Demonstrates an understanding that vertical and horizontal representations are equivalent	subtrahends and minuends through 20 (whole numbers)* • Uses models to calculate differences through 1000 (whole numbers)* • Uses sharing for division • Models whole number multiplication and division algorithms (e.g., shows multiplication as repeated addition and division as repeated subtraction) • Models multiplication and division algorithms using arrays (whole numbers) • Recognizes addition and subtraction fact families through 18 • Demonstrates an understanding of the zero property of multiplication • Demonstrates an understanding of the inverse relationship between multiplication and division
Numerical Operations - Add and Subtract	**Numerical Operations - Add and Subtract**	**Numerical Operations - Add and Subtract**
• Adds two 1-digit numbers with sums to 10 in horizontal format • Adds two 1-digit numbers with sums to 10 in vertical format • Adds two 1-digit numbers with sums between 10 and 19 in horizontal format • Adds two 1-digit numbers with sums between 10 and 19 in vertical format* • Adds multiple 1-digit numbers • Uses strategies for addition facts (e.g., compatible numbers, counting on, doubles, neighbors, making tens) • Adds 1-digit to multiple-digit number with no regrouping* • Adds 2-digit numbers with no regrouping • Adds 2-digit to 3-digit number, with no regrouping, with sums under 1000* • Subtracts two 1-digit numbers horizontally • Subtracts a 1-digit number from a 2-digit number that is less than 20 (whole numbers only) • Subtracts two 1-digit numbers vertically • Uses strategies for subtraction facts (e.g., counting back, one less, two less)* • Subtracts a 2-digit number from a 2-digit number, with no regrouping	• Uses strategies for addition facts (e.g., compatible numbers, counting on, doubles, neighbors, making tens) • Adds 2-digit to 3-digit number, with no regrouping, with sums under 1000* • Adds two or three 2-digit number with regrouping • Adds 1-, 2-, and/or 3-digit numbers with sums under 100* • Adds 3-digit numbers with no regrouping • Adds 3-digit numbers, with regrouping, with sums under 1000 • Adds multiple-digit numbers, with no regrouping, with sums over 1000* • Subtracts a 1-digit number from a 2-digit number that is less than 20 (whole numbers only) • Uses strategies for subtraction facts (e.g., counting back, one less, two less)* • Subtracts a 1-digit number from a 2-digit number with no regrouping, vertically • Subtracts a 1-digit number from a multiple-digit number* • Subtracts a 2-digit number from a 2-digit number, with no regrouping • Subtracts 2- and/or 3-digit numbers with no regrouping • Adds 1-digit numbers with sums to 18 (with parentheses)	• Adds 1-digit to multiple-digit number with regrouping* • Adds two or three 2-digit number with regrouping • Adds 2-digit to 3-digit number with regrouping • Adds 3-digit numbers, with regrouping, with sums under 1000 • Performs mental computation with 2, 3, or 4 addends • Adds two 3- and/or 4-digit numbers, with regrouping, with sums over 1000 • Adds multiple-digit numbers, with regrouping, with sums over 1000 • Instantly recalls basic subtraction facts with minuend less than 10* • Subtracts a 1-digit number from a multiple-digit number* • Subtracts 1-digit number from a 2-digit number with regrouping* • Subtracts a 2-digit number from a 2-digit number, with regrouping • Uses strategies for sums and differences with 2-digit numbers (e.g., decomposing, compatible, compensation, partial sums, counting on) • Subtracts 2- and/or 3-digit numbers with no regrouping • Subtracts 3- or 4-digit numbers with regrouping • Performs mental subtraction with numbers under 1000 • Subtracts multiple-digit numbers with no regrouping*

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		• Adds decimals to the hundredths place (same number of digits) • Subtracts decimals to the hundredths place (same number of digits) without regrouping
Numerical Operations - Multiply and Divide	**Numerical Operations - Multiply and Divide**	**Numerical Operations - Multiply and Divide**
• Instantly recalls basic multiplication facts where one factor is 0-5 and the other factor is 0-12	• Instantly recalls basic multiplication facts where one factor is 0-5 and the other factor is 0-12 • Multiplies basic facts to 10 x 10 vertically	• Multiplies basic facts to 10 x 10 vertically • Multiplies a 2-digit number by a 1-digit number with regrouping • Instantly recalls division facts with dividend and divisors less than 10
Estimation	**Estimation**	**Estimation**
		• Rounds 2- and 3- digit whole numbers to the nearest ten • Rounds 3-digit whole numbers to the nearest hundred • Uses rounding to estimate answers to real-world problems involving addition of numbers less than 100 (whole numbers only)
New Vocabulary: add, double, numeral, sum	*New Vocabulary:* before, between, count, counting order, dime, dollar sign, eighth, eleventh, fact family, fifth, greater, greater than, hundred, largest, ninth, penny, seventh, tenth, thousand	*New Vocabulary:* closest, coins, digit, dozen, even number, factor, fourths, fraction, hundred thousand, hundreds, million, nearest, nickel, number statement, odd number, one, round, row, smallest, symmetrical, ten, ten thousand, thirds, thousandth, unifix cubes, unit, value
New Signs and Symbols: $ dollar sign, × multiplication, – subtraction	*New Signs and Symbols:* ( ) order of operations, ¢ cent sign	*New Signs and Symbols:* { } set notation, ÷ division, long division symbol

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Subject: Mathematics
Goal Strand: Number and Numerical Operations
RIT Score Range: 181 - 190

Skills and Concepts to Enhance 171 - 180	Skills and Concepts to Develop 181 - 190	Skills and Concepts to Introduce 191 - 200
Number Sense - Construct Meaning	**Number Sense - Construct Meaning**	**Number Sense - Construct Meaning**
• Identifies the numerical and written name for whole numbers 21 to 100 (e.g., 62 is sixty-two, and vice versa)* • Identifies the numeral and written name for whole numbers 101 to 999 (e.g., 342 is three hundred forty-two, and vice versa)* • Identifies the numeral and written name for ordinal numbers 1st to 20th (e.g., 1st is first, and vice versa)* • Counts numbers 0-100 • Counts numbers 0-1000* • Identifies missing numbers in a series through 100 • Counts by 2's to 100 • Counts and writes by 5's* • Counts backwards from a given number (given number greater than 10)* • Identifies a whole number that comes between 2 given numbers (20 to 100)* • Counts ordinal numbers (first to tenth) • Identifies the ordinal number that comes before, between, or after a given ordinal number (first to tenth)* • Represents 1/2 with a diagram or model	• Identifies the numeral and written name for whole numbers 101 to 999 (e.g., 342 is three hundred forty-two, and vice versa)* • Identifies the numeral and written name for whole numbers to 1000 to 9999 (e.g., 3456 is three thousand, four hundred fifty-six, and vice versa) • Identifies the numeral and written name for whole numbers 10,000 to 100,000 • Identifies the number that is "1 more than" a given number* • Identifies the number that is "1 less than" a given number • Counts numbers 0-1000* • Counts and writes by 3's* • Counts and writes by 4's* • Counts and writes by 6's, 7's, 8's, or 9's* • Counts ordinal numbers (first to tenth) • Identifies the ordinal number that comes before, between, or after a given ordinal number (first to tenth)* • Represents 1/4 with a diagram or model* • Represents 3/4 with a diagram or model* • Identifies equal parts by using models • Identifies 1/2 from a region or set • Identifies 1/4 from a region or set • Identifies 2/3 or 3/3 from a region or set* • Identifies tenths from a region or set* • Identifies eighths from a region or set • Identifies a fraction (denominators other than 2, 3, 4, 8, 10) from a region or set	• Identifies whole numbers 100 - 999 using base-10 blocks* • Identifies whole numbers over 999 using base-10 blocks* • Identifies the numeral and written name for whole numbers with a zero between digits to the ten thousands place • Identifies the numeral and written name for whole numbers 10,000 to 100,000 • Identifies the numeral and written name for whole numbers over 100,000 • Identifies the numeral and written name for ordinal numbers 21st to100th (e.g., 21st is twenty-first, and vice versa)* • Represents 1/3 with a diagram or model • Identifies one-half from a region or set* • Identifies 1/4 from a region or set • Identifies 1/3 from a region or set • Identifies 2/3 or 3/3 from a region or set* • Identifies tenths from a region or set* • Identifies a fraction (denominators other than 2, 3, 4, 8, 10) from a region or set • Identifies a decimal on a number line to the tenths place*
Number Sense - Understand Place Value	**Number Sense - Understand Place Value**	**Number Sense - Understand Place Value**
• Counts objects that are grouped into tens and ones • Identifies the place value and value of each digit in whole numbers through the tens place*	• Counts objects that are grouped into tens and ones • Identifies whole numbers under 100 given place value terms (e.g., 3 tens and 4 ones = 34) • Identifies the place value and value of each digit in	• Identifies whole numbers under 100 given place value terms (e.g., 3 tens and 4 ones = 34) • Identifies the place value and value of each digit in whole numbers through the thousands

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	whole numbers through the tens place* • Identifies the place value and value of each digit in whole numbers through the hundreds place • Identifies the place value and value of each digit in whole numbers through the thousands • Identifies the place value and value of each digit in whole numbers through the hundred thousands • Applies base ten place value concepts to solve problems using decimals*	• Identifies the place value and value of each digit in whole numbers through the hundred thousands • Writes whole numbers in standard and expanded form through the hundreds • Writes whole numbers in standard and expanded form through the thousands
Number Sense - Recognize and Use U.S. Currency	**Number Sense - Recognize and Use U.S. Currency**	**Number Sense - Recognize and Use U.S. Currency**
• Adds money vertically with no regrouping* • Identifies the value of a collection of coins to $1.00 (with pictures of coins) • Identifies the value of a collection of coins and bills to $10.00 by "counting on" (with picture of money) • Uses cent sign and dollar sign when appropriate* • Connects money with place value	• Identifies the value of a collection of coins to $1.00 (without picture of coins) • Adds money with regrouping • Identifies the value of a collection of coins and bills to $10.00 by "counting on" (with picture of money) • Identifies the value of a collection of coins and bills to $100.00 by "counting on"* • Finds equivalent combinations of coins with the same value* • Combines a collection of coins and identifies the correct notation • Makes change to $1.00 by "counting on" or subtracting	• Identifies the value of a collection of coins to $1.00 (without picture of coins) • Adds money with regrouping • Identifies the value of a collection of coins and bills to $10.00 by "counting on" (without picture of money) • Identifies the value of a collection of coins and bills to $100.00 by "counting on"* • Finds equivalent combinations of coins with the same value* • Finds equivalent combinations of dollars and cents with the same value* • Makes change to $1.00 by "counting on" or subtracting
Number Sense - Compare and Order Numbers	**Number Sense - Compare and Order Numbers**	**Number Sense - Compare and Order Numbers**
• Compares whole numbers through100* • Compares whole numbers through 999 • Orders sets of objects 0-10* • Orders sets of objects 0-20*	• Compares whole numbers through 999 • Compares whole numbers through 9999 • Orders sets of objects 0-20* • Orders whole numbers less than 100 • Orders whole numbers less than 1000* • Compares and orders decimals to the hundredths place (same number of digits after decimal)	• Compares sets of objects and identifies which is equal to, more than, or less than the other (1 to 10 objects)* • Compares whole numbers through 999,999 • Compares whole numbers to 100, using the symbols for 'less than', 'equal to', or 'greater than' (<, =, >) • Compares whole numbers through the thousands using the symbols <, >, or = • Orders whole numbers less than 1000* • Orders whole numbers less than 10,000 • Compares and orders money in decimal form • Compares and orders decimals to the thousandths place (same number of digits after decimal)*
Number Sense - Represent Equivalence of Numbers	**Number Sense - Represent Equivalence of Numbers**	**Number Sense - Represent Equivalence of Numbers**
• Writes equivalent forms of whole number expressions (e.g., 15 + 5 = 10 + 10) • Identifies equivalent fractions using visual representations*	• Counts and converts to dozens with models* • Writes equivalent forms of whole numbers 11 to 20 using addition (e.g., 14 = 7 + 7)* • Writes equivalent forms of whole numbers using multiplication (e.g., 12 = 4 x 3 = 2 x 6 = 2 x 2 x 3)* • Converts to dozens without models	• Counts and converts to dozens with models* • Writes equivalent forms of whole numbers 11 to 20 using addition (e.g., 14 = 7 + 7)* • Writes equivalent forms of whole numbers using multiplication (e.g., 12 = 4 x 3 = 2 x 6 = 2 x 2 x 3)* • Converts to dozens without models • Matches numeric and visual representation of

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		equivalent fractions
Number Sense - Apply Number Theory Concepts	**Number Sense - Apply Number Theory Concepts**	**Number Sense - Apply Number Theory Concepts**
	• Determines whether a set of objects has an odd or even number of elements • Distinguishes between odd and even numbers	• Distinguishes between odd and even numbers
Numerical Operations - Develop Meanings	**Numerical Operations - Develop Meanings**	**Numerical Operations - Develop Meanings**
• Uses a number line to construct addition facts with sums through 20 (whole numbers)* • Uses models to calculate whole number sums through 999* • Uses models to calculate differences through 100 (whole numbers)* • Uses models to calculate differences through 1000 (whole numbers)* • Recognizes addition and subtraction fact families through 18 • Demonstrates an understanding that vertical and horizontal representations are equivalent	• Uses a number line to construct subtraction facts with subtrahends and minuends through 20 (whole numbers)* • Uses models to calculate differences through 1000 (whole numbers)* • Uses sharing for division • Models whole number multiplication and division algorithms (e.g., shows multiplication as repeated addition and division as repeated subtraction) • Models multiplication and division algorithms using arrays (whole numbers) • Recognizes addition and subtraction fact families through 18 • Demonstrates an understanding of the zero property of multiplication • Demonstrates an understanding of the inverse relationship between multiplication and division	• Uses a number line to construct subtraction facts with subtrahends and minuends through 20 (whole numbers)* • Adds and subtracts whole numbers using place value • Uses repeated subtraction for division* • Models whole number multiplication and division algorithms (e.g., shows multiplication as repeated addition and division as repeated subtraction) • Demonstrates an understanding of the commutative property of multiplication with simple problems* • Demonstrates an understanding of the zero property of multiplication • Demonstrates an understanding of the multiplicative property of 1 (identity) • Uses models to add and subtract fractions and connect the actions to algorithms*
Numerical Operations - Add and Subtract	**Numerical Operations - Add and Subtract**	**Numerical Operations - Add and Subtract**
• Uses strategies for addition facts (e.g., compatible numbers, counting on, doubles, neighbors, making tens) • Adds 2-digit to 3-digit number, with no regrouping, with sums under 1000* • Adds two or three 2-digit number with regrouping • Adds 1-, 2-, and/or 3-digit numbers with sums under 100* • Adds 3-digit numbers with no regrouping • Adds 3-digit numbers, with regrouping, with sums under 1000 • Adds multiple-digit numbers, with no regrouping, with sums over 1000* • Subtracts a 1-digit number from a 2-digit number that is less than 20 (whole numbers only) • Uses strategies for subtraction facts (e.g., counting back, one less, two less)* • Subtracts a 1-digit number from a 2-digit number with no regrouping, vertically • Subtracts a 1-digit number from a multiple-digit	• Adds 1-digit to multiple-digit number with regrouping* • Adds two or three 2-digit number with regrouping • Adds 2-digit to 3-digit number with regrouping • Adds 3-digit numbers, with regrouping, with sums under 1000 • Performs mental computation with 2, 3, or 4 addends • Adds two 3- and/or 4-digit numbers, with regrouping, with sums over 1000 • Adds multiple-digit numbers, with regrouping, with sums over 1000 • Instantly recalls basic subtraction facts with minuend less than 10* • Subtracts a 1-digit number from a multiple-digit number* • Subtracts 1-digit number from a 2-digit number with regrouping* • Subtracts a 2-digit number from a 2-digit number, with regrouping	• Adds 2-digit to 3-digit number with regrouping • Uses number sense strategies to determine the correct answer for an addition computation* • Adds two 3- and/or 4-digit numbers, with regrouping, with sums over 1000 • Adds multiple-digit numbers, with regrouping, with sums over 1000 • Adds multiple-digit numbers with sums under 1000 • Subtracts 1-digit number from a 2-digit number with regrouping* • Subtracts a 2-digit number from a 2-digit number, with regrouping • Uses strategies for sums and differences with 2-digit numbers (e.g., decomposing, compatible, compensation, partial sums, counting on) • Subtracts a 2-digit number from a 3-digit number with a single regrouping • Subtracts 3- or 4-digit numbers with regrouping • Performs mental subtraction with numbers under 1000

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number* • Subtracts a 2-digit number from a 2-digit number, with no regrouping • Subtracts 2- and/or 3-digit numbers with no regrouping • Adds 1-digit numbers with sums to 18 (with parentheses)	• Uses strategies for sums and differences with 2-digit numbers (e.g., decomposing, compatible, compensation, partial sums, counting on) • Subtracts 2- and/or 3-digit numbers with no regrouping • Subtracts 3- or 4-digit numbers with regrouping • Performs mental subtraction with numbers under 1000 • Subtracts multiple-digit numbers with no regrouping* • Adds decimals to the hundredths place (same number of digits) • Subtracts decimals to the hundredths place (same number of digits) without regrouping	• Performs mental subtraction with numbers 1000 and over • Subtracts multiple-digit numbers with no regrouping* • Subtracts fractions with like denominators without reducing • Adds decimals to the hundredths place (same number of digits) • Adds decimals to the hundredths place in vertical format (not same number of digits)* • Adds decimals to the thousandths place vertically with and without regrouping • Subtracts decimals to the hundredths place (same number of digits) without regrouping • Subtracts decimals to the hundredths place (same number of digits) with regrouping • Subtracts decimals to the thousandths place, vertically, with and without regrouping
Numerical Operations - Multiply and Divide	**Numerical Operations - Multiply and Divide**	**Numerical Operations - Multiply and Divide**
• Instantly recalls basic multiplication facts where one factor is 0-5 and the other factor is 0-12 • Multiplies basic facts to 10 x 10 vertically	• Multiplies basic facts to 10 x 10 vertically • Multiplies a 2-digit number by a 1-digit number with regrouping • Instantly recalls division facts with dividend and divisors less than 10	• Instantly recalls basic multiplication facts where one factor is 6-12 and the other factor is 0-12* • Multiplies a 2- or 3-digit number by a 1-digit number with no regrouping • Multiplies a 2-digit number by a 1-digit number with regrouping • Multiplies a 3- or 4-digit number by a 1-digit number • Multiplies a 2-digit number by a 2-digit number with no regrouping* • Multiplies a 3-digit number by a 2-digit number with no regrouping • Performs mental computation with multiplication • Instantly recalls division facts with dividend and divisors less than 10 • Instantly recalls division facts with dividend and divisors less than 13 • Divides a 2-digit number by a 1-digit number with no remainder • Uses strategies to determine 1 missing digit (multiplication/division only) • Evaluates numerical expressions using grouping symbols (whole numbers only)
Estimation	**Estimation**	**Estimation**
	• Rounds 2- and 3- digit whole numbers to the nearest ten • Rounds 3-digit whole numbers to the nearest hundred	• Rounds 2- and 3- digit whole numbers to the nearest ten • Rounds 3-digit whole numbers to the nearest hundred

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	• Uses rounding to estimate answers to real-world problems involving addition of numbers less than 100 (whole numbers only)	• Uses rounding to estimate answers to real-world problems involving numbers less than 1000 with addition and subtraction (whole numbers only)* • Uses front end digits to estimate answers in addition and subtraction computations (whole numbers only)* • Uses rounding to estimate answers to addition and subtraction problems (whole numbers only) • Uses rounding to estimate answers to 1-step problems involving answers less than $1 (whole numbers only, e.g., 10 cents + 10 cents)* • Uses rounding to estimate answers to 1-step problems involving answers less than $20 (decimals only, e.g., $1.20 + $2.75)
New Vocabulary: before, between, count, counting order, dime, dollar sign, eighth, eleventh, fact family, fifth, greater, greater than, hundred, largest, ninth, penny, seventh, tenth, thousand	*New Vocabulary:* closest, coins, digit, dozen, even number, factor, fourths, fraction, hundred thousand, hundreds, million, nearest, nickel, number statement, odd number, one, round, row, smallest, symmetrical, ten, ten thousand, thirds, thousandth, unifix cubes, unit, value	*New Vocabulary:* billion, hundred million, hundredths, quintillion, standard numeral, symbol, thousands, trillion, zero
New Signs and Symbols: ( ) order of operations, ¢ cent sign	*New Signs and Symbols:* { } set notation, ÷ division, long division symbol	*New Signs and Symbols:* ≈ approximately equal to, > greater than, ≥ greater than or equal to, < less than, ≤ less than or equal to, R remainder

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Subject: Mathematics
Goal Strand: Number and Numerical Operations
RIT Score Range: 191 - 200

Skills and Concepts to Enhance 181 - 190	Skills and Concepts to Develop 191 - 200	Skills and Concepts to Introduce 201 - 210
Number Sense - Construct Meaning	**Number Sense - Construct Meaning**	**Number Sense - Construct Meaning**
• Identifies the numeral and written name for whole numbers 101 to 999 (e.g., 342 is three hundred forty-two, and vice versa)* • Identifies the numeral and written name for whole numbers to 1000 to 9999 (e.g., 3456 is three thousand, four hundred fifty-six, and vice versa) • Identifies the numeral and written name for whole numbers 10,000 to 100,000 • Identifies the number that is "1 more than" a given number* • Identifies the number that is "1 less than" a given number • Counts numbers 0-1000* • Counts and writes by 3's* • Counts and writes by 4's* • Counts and writes by 6's, 7's, 8's, or 9's* • Counts ordinal numbers (first to tenth) • Identifies the ordinal number that comes before, between, or after a given ordinal number (first to tenth)* • Represents 1/4 with a diagram or model* • Represents 3/4 with a diagram or model* • Identifies equal parts by using models • Identifies 1/2 from a region or set • Identifies 1/4 from a region or set • Identifies 2/3 or 3/3 from a region or set* • Identifies tenths from a region or set* • Identifies eighths from a region or set • Identifies a fraction (denominators other than 2, 3, 4, 8, 10) from a region or set	• Identifies whole numbers 100 - 999 using base-10 blocks* • Identifies whole numbers over 999 using base-10 blocks* • Identifies the numeral and written name for whole numbers with a zero between digits to the ten thousands place • Identifies the numeral and written name for whole numbers 10,000 to 100,000 • Identifies the numeral and written name for whole numbers over 100,000 • Identifies the numeral and written name for ordinal numbers 21st to100th (e.g., 21st is twenty-first, and vice versa)* • Represents 1/3 with a diagram or model • Identifies one-half from a region or set* • Identifies 1/4 from a region or set • Identifies 1/3 from a region or set • Identifies 2/3 or 3/3 from a region or set* • Identifies tenths from a region or set* • Identifies a fraction (denominators other than 2, 3, 4, 8, 10) from a region or set • Identifies a decimal on a number line to the tenths place*	• Identifies whole numbers over 999 using base-10 blocks* • Identifies the numeral and written name for whole numbers with a zero between digits to the ten thousands place • Identifies the numeral and written name for whole numbers over 100,000 • Identifies a whole number that comes before and/or after a given number (over 100)* • Identifies halves of a region using nonadjacent parts
Number Sense - Understand Place Value	**Number Sense - Understand Place Value**	**Number Sense - Understand Place Value**
• Counts objects that are grouped into tens and ones • Identifies whole numbers under 100 given place value terms (e.g., 3 tens and 4 ones = 34) • Identifies the place value and value of each digit in	• Identifies whole numbers under 100 given place value terms (e.g., 3 tens and 4 ones = 34) • Identifies the place value and value of each digit in whole numbers through the thousands	• Writes equivalent forms of whole numbers using place value (e.g., 54 = 4 tens and 14 ones) • Identifies the place value and value of each digit in whole numbers through the billions

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whole numbers through the tens place* • Identifies the place value and value of each digit in whole numbers through the hundreds place • Identifies the place value and value of each digit in whole numbers through the thousands • Identifies the place value and value of each digit in whole numbers through the hundred thousands • Applies base ten place value concepts to solve problems using decimals*	• Identifies the place value and value of each digit in whole numbers through the hundred thousands • Writes whole numbers in standard and expanded form through the hundreds • Writes whole numbers in standard and expanded form through the thousands	• Writes whole numbers in standard and expanded form through the hundred thousands • Applies base ten place value concepts with whole numbers to solve problems • Writes whole numbers using place value terms and vice versa • Identifies the place value and value of each digit to the tenths*
Number Sense - Recognize and Use U.S. Currency	**Number Sense - Recognize and Use U.S. Currency**	**Number Sense - Recognize and Use U.S. Currency**
• Identifies the value of a collection of coins to $1.00 (without picture of coins) • Adds money with regrouping • Identifies the value of a collection of coins and bills to $10.00 by "counting on" (with picture of money) • Identifies the value of a collection of coins and bills to $100.00 by "counting on"* • Finds equivalent combinations of coins with the same value* • Combines a collection of coins and identifies the correct notation • Makes change to $1.00 by "counting on" or subtracting	• Identifies the value of a collection of coins to $1.00 (without picture of coins) • Adds money with regrouping • Identifies the value of a collection of coins and bills to $10.00 by "counting on" (without picture of money) • Identifies the value of a collection of coins and bills to $100.00 by "counting on"* • Finds equivalent combinations of coins with the same value* • Finds equivalent combinations of dollars and cents with the same value* • Makes change to $1.00 by "counting on" or subtracting	• Finds equivalent combinations of dollars and cents with the same value*
Number Sense - Compare and Order Numbers	**Number Sense - Compare and Order Numbers**	**Number Sense - Compare and Order Numbers**
• Compares whole numbers through 999 • Compares whole numbers through 9999 • Orders sets of objects 0-20* • Orders whole numbers less than 100 • Orders whole numbers less than 1000* • Compares and orders decimals to the hundredths place (same number of digits after decimal)	• Compares sets of objects and identifies which is equal to, more than, or less than the other (1 to 10 objects)* • Compares whole numbers through 999,999 • Compares whole numbers to 100, using the symbols for 'less than', 'equal to', or 'greater than' (<, =, >) • Compares whole numbers through the thousands using the symbols <, >, or = • Orders whole numbers less than 1000* • Orders whole numbers less than 10,000 • Compares and orders money in decimal form • Compares and orders decimals to the thousandths place (same number of digits after decimal)*	• Compares whole numbers through 999,999 • Compares whole numbers through the billions using the symbols <, >, or =* • Orders whole numbers less than 10,000 • Orders whole numbers a million or greater • Compares fractions (e.g., common denominator, 1 in the numerator, denominator is 2, 3, 4, 6, 8, 10)
Number Sense - Represent Equivalence of Numbers	**Number Sense - Represent Equivalence of Numbers**	**Number Sense - Represent Equivalence of Numbers**
• Counts and converts to dozens with models* • Writes equivalent forms of whole numbers 11 to 20 using addition (e.g., 14 = 7 + 7)* • Writes equivalent forms of whole numbers using multiplication (e.g., 12 = 4 x 3 = 2 x 6 = 2 x 2 x 3)* • Converts to dozens without models	• Counts and converts to dozens with models* • Writes equivalent forms of whole numbers 11 to 20 using addition (e.g., 14 = 7 + 7)* • Writes equivalent forms of whole numbers using multiplication (e.g., 12 = 4 x 3 = 2 x 6 = 2 x 2 x 3)* • Converts to dozens without models • Matches numeric and visual representation of	• Converts a basic fractional numeral to lowest terms (e.g., halves, thirds, quarters)* • Writes a terminating decimal as a fraction or mixed number

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	equivalent fractions	
Number Sense - Apply Number Theory Concepts	**Number Sense - Apply Number Theory Concepts**	**Number Sense - Apply Number Theory Concepts**
• Determines whether a set of objects has an odd or even number of elements • Distinguishes between odd and even numbers	• Distinguishes between odd and even numbers	• Determines multiples of a whole number* • Determines common multiples of whole numbers*
Numerical Operations - Develop Meanings	**Numerical Operations - Develop Meanings**	**Numerical Operations - Develop Meanings**
• Uses a number line to construct subtraction facts with subtrahends and minuends through 20 (whole numbers)* • Uses models to calculate differences through 1000 (whole numbers)* • Uses sharing for division • Models whole number multiplication and division algorithms (e.g., shows multiplication as repeated addition and division as repeated subtraction) • Models multiplication and division algorithms using arrays (whole numbers) • Recognizes addition and subtraction fact families through 18 • Demonstrates an understanding of the zero property of multiplication • Demonstrates an understanding of the inverse relationship between multiplication and division	• Uses a number line to construct subtraction facts with subtrahends and minuends through 20 (whole numbers)* • Adds and subtracts whole numbers using place value • Uses repeated subtraction for division* • Models whole number multiplication and division algorithms (e.g., shows multiplication as repeated addition and division as repeated subtraction) • Demonstrates an understanding of the commutative property of multiplication with simple problems* • Demonstrates an understanding of the zero property of multiplication • Demonstrates an understanding of the multiplicative property of 1 (identity) • Uses models to add and subtract fractions and connect the actions to algorithms*	• Adds and subtracts whole numbers using place value • Uses a number line to model multiplication (whole numbers)* • Models whole number multiplication and division algorithms (e.g., uses physical materials to show 4 groups of 3 objects)* • Demonstrates an understanding of the associative property of addition* • Demonstrates an understanding of the commutative property of addition • Demonstrates an understanding of the zero property of addition (identity) • Demonstrates an understanding of symmetric property applied to basic addition and subtraction facts (e.g., 10 = 2 + 8 is the same as 2 + 8 = 10 or 7 = 10 - 3 is the same as 10 - 3 = 7)* • Demonstrates an understanding of the commutative property of multiplication with simple problems* • Demonstrates an understanding of symmetric property applied to multiplication (e.g., 8 x 4 = 32 is the same as 32 = 8 x 4)* • Recognizes multiplication and division fact families* • Uses models to add and subtract fractions and connect the actions to algorithms*
Numerical Operations - Add and Subtract	**Numerical Operations - Add and Subtract**	**Numerical Operations - Add and Subtract**
• Adds 1-digit to multiple-digit number with regrouping* • Adds two or three 2-digit number with regrouping • Adds 2-digit to 3-digit number with regrouping • Adds 3-digit numbers, with regrouping, with sums under 1000 • Performs mental computation with 2, 3, or 4 addends • Adds two 3- and/or 4-digit numbers, with regrouping, with sums over 1000 • Adds multiple-digit numbers, with regrouping, with sums over 1000 • Instantly recalls basic subtraction facts with minuend less than 10*	• Adds 2-digit to 3-digit number with regrouping • Uses number sense strategies to determine the correct answer for an addition computation* • Adds two 3- and/or 4-digit numbers, with regrouping, with sums over 1000 • Adds multiple-digit numbers, with regrouping, with sums over 1000 • Adds multiple-digit numbers with sums under 1000 • Subtracts 1-digit number from a 2-digit number with regrouping* • Subtracts a 2-digit number from a 2-digit number, with regrouping • Uses strategies for sums and differences with 2-digit	• Instantly recalls basic addition facts with sums to 18 in a table* • Uses reasoning strategies to solve magic squares and related puzzles (addition, whole numbers only) • Adds multiple-digit numbers, with regrouping, with sums over 1000 • Adds multiple-digit numbers with sums under 1000 • Performs mental computation with more than 4 addends • Subtracts 3- or 4-digit numbers with regrouping • Performs mental subtraction with numbers 1000 and over • Subtracts numbers with 5 digits or more with

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• Subtracts a 1-digit number from a multiple-digit number* • Subtracts 1-digit number from a 2-digit number with regrouping* • Subtracts a 2-digit number from a 2-digit number, with regrouping • Uses strategies for sums and differences with 2-digit numbers (e.g., decomposing, compatible, compensation, partial sums, counting on) • Subtracts 2- and/or 3-digit numbers with no regrouping • Subtracts 3- or 4-digit numbers with regrouping • Performs mental subtraction with numbers under 1000 • Subtracts multiple-digit numbers with no regrouping* • Adds decimals to the hundredths place (same number of digits) • Subtracts decimals to the hundredths place (same number of digits) without regrouping	numbers (e.g., decomposing, compatible, compensation, partial sums, counting on) • Subtracts a 2-digit number from a 3-digit number with a single regrouping • Subtracts 3- or 4-digit numbers with regrouping • Performs mental subtraction with numbers under 1000 • Performs mental subtraction with numbers 1000 and over • Subtracts multiple-digit numbers with no regrouping* • Subtracts fractions with like denominators without reducing • Adds decimals to the hundredths place (same number of digits) • Adds decimals to the hundredths place in vertical format (not same number of digits)* • Adds decimals to the thousandths place vertically with and without regrouping • Subtracts decimals to the hundredths place (same number of digits) without regrouping • Subtracts decimals to the hundredths place (same number of digits) with regrouping • Subtracts decimals to the thousandths place, vertically, with and without regrouping	regrouping • Uses strategies to determine 2 or more missing digits (addition/subtraction only) • Adds fractions with like denominators without reducing • Adds simple mixed fractions with unlike denominators (e.g., halves, thirds, fourths, eighths)* • Adds whole numbers and fractions • Subtracts fractions with like denominators without reducing • Subtracts mixed fractions with like denominators with no regrouping • Subtracts whole numbers, fractions, and mixed fractions* • Adds decimals to the hundredths place in vertical format (not same number of digits)* • Adds decimals to the thousandths place horizontally with and without regrouping • Subtracts decimals to the hundredths place (same number of digits) with regrouping • Subtracts decimals to the thousandths place, vertically, with and without regrouping • Subtracts decimals through the hundred-thousandths place, vertically*
Numerical Operations - Multiply and Divide	**Numerical Operations - Multiply and Divide**	**Numerical Operations - Multiply and Divide**
• Multiplies basic facts to 10 x 10 vertically • Multiplies a 2-digit number by a 1-digit number with regrouping • Instantly recalls division facts with dividend and divisors less than 10	• Instantly recalls basic multiplication facts where one factor is 6-12 and the other factor is 0-12* • Multiplies a 2- or 3-digit number by a 1-digit number with no regrouping • Multiplies a 2-digit number by a 1-digit number with regrouping • Multiplies a 3- or 4-digit number by a 1-digit number • Multiplies a 2-digit number by a 2-digit number with no regrouping* • Multiplies a 3-digit number by a 2-digit number with no regrouping • Performs mental computation with multiplication • Instantly recalls division facts with dividend and divisors less than 10 • Instantly recalls division facts with dividend and divisors less than 13 • Divides a 2-digit number by a 1-digit number with no remainder • Uses strategies to determine 1 missing digit	• Instantly recalls basic multiplication facts where one factor is 6-12 and the other factor is 0-12* • Instantly recalls basic multiplication and division facts in a table • Multiplies a 2-digit number by a 1-digit number with regrouping • Multiplies a 3- or 4-digit number by a 1-digit number • Multiplies multiple 1-digit numbers • Multiplies a 2-digit number by a 2-digit number with no regrouping* • Multiplies a 2-digit number by a 2-digit number with regrouping • Multiplies a 3-digit number by a 2-digit number with regrouping • Performs mental computation with multiplication • Multiplies a 2- or 3-digit number by multiples of 10 or 100 • Multiplies a 3-digit number by a 3-digit number • Instantly recalls division facts with dividend and

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	(multiplication/division only) • Evaluates numerical expressions using grouping symbols (whole numbers only)	divisors less than 13 • Divides a 1-digit number by a 1-digit number with a remainder* • Divides a 2-digit number by a 1-digit number with no remainder • Divides a 2-digit number or a 3-digit number by a 1-digit number with a remainder • Performs mental computation with division • Divides a 3-digit number by a 1-digit number with no remainder • Divides a 4-digit number by a 1-digit number with no remainder • Divides a 4-digit number by a 1-digit number with a remainder* • Divides a 2-digit number by a 2-digit number with a remainder • Divides a 3-digit number by a multiple of 10 • Divides a 4-digit number by a 2-digit number • Evaluates numerical expressions using grouping symbols (whole numbers only) • Evaluates a numerical expression involving more than one operation*
Estimation	**Estimation**	**Estimation**
• Rounds 2- and 3- digit whole numbers to the nearest ten • Rounds 3-digit whole numbers to the nearest hundred • Uses rounding to estimate answers to real-world problems involving addition of numbers less than 100 (whole numbers only)	• Rounds 2- and 3- digit whole numbers to the nearest ten • Rounds 3-digit whole numbers to the nearest hundred • Uses rounding to estimate answers to real-world problems involving numbers less than 1000 with addition and subtraction (whole numbers only)* • Uses front end digits to estimate answers in addition and subtraction computations (whole numbers only)* • Uses rounding to estimate answers to addition and subtraction problems (whole numbers only) • Uses rounding to estimate answers to 1-step problems involving answers less than $1 (whole numbers only, e.g., 10 cents + 10 cents)* • Uses rounding to estimate answers to 1-step problems involving answers less than $20 (decimals only, e.g., $1.20 + $2.75)	• Rounds 4-, 5-, and 6-digit whole numbers to the nearest ten • Rounds 4-, 5-, and 6-digit whole numbers to the nearest hundred • Rounds 4-, 5-, and 6-digit whole numbers to the nearest thousand • Rounds whole numbers to the nearest hundred thousand • Explains the rules for rounding* • Rounds decimals to the nearest whole number* • Uses rounding to estimate answers to real-world problems involving numbers 1000 or greater with addition and subtraction (whole numbers only)* • Uses front end digits to estimate answers in addition and subtraction computations (whole numbers only)* • Uses front end estimation for multiplication and division computations (whole numbers only)* • Uses rounding to estimate answers to addition and subtraction problems (whole numbers only) • Uses rounding to estimate answers to simple multiplication and division problems (whole numbers

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		only) • Uses rounding to estimate answers to 1-step problems involving answers $20 or greater (using decimals)* • Uses rounding to estimate answers to 2-step problems involving money (whole numbers only)* • Uses rounding to estimate answers to 2-step problems involving money (using decimals)
New Vocabulary: closest, coins, digit, dozen, even number, factor, fourths, fraction, hundred thousand, hundreds, million, nearest, nickel, number statement, odd number, one, round, row, smallest, symmetrical, ten, ten thousand, thirds, thousandth, unifix cubes, unit, value	*New Vocabulary:* billion, hundred million, hundredths, quintillion, standard numeral, symbol, thousands, trillion, zero	*New Vocabulary:* biggest, column, common multiple, compatible numbers, expanded numeral, hundred thousands, hundredth, inverse operation, kilowatt, magic square, multiple, place value, ten thousands, twice
New Signs and Symbols: { } set notation, ÷ division, long division symbol	*New Signs and Symbols:* ≈ approximately equal to, > greater than, ≥ greater than or equal to, < less than, ≤ less than or equal to, R remainder	*New Signs and Symbols:* ? a variable, − negative number

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Subject: Mathematics
Goal Strand: Number and Numerical Operations
RIT Score Range: 201 - 210

Skills and Concepts to Enhance 191 - 200	Skills and Concepts to Develop 201 - 210	Skills and Concepts to Introduce 211 - 220
Number Sense - Construct Meaning	**Number Sense - Construct Meaning**	**Number Sense - Construct Meaning**
• Identifies whole numbers 100 - 999 using base-10 blocks* • Identifies whole numbers over 999 using base-10 blocks* • Identifies the numeral and written name for whole numbers with a zero between digits to the ten thousands place • Identifies the numeral and written name for whole numbers 10,000 to 100,000 • Identifies the numeral and written name for whole numbers over 100,000 • Identifies the numeral and written name for ordinal numbers 21st to100th (e.g., 21st is twenty-first, and vice versa)* • Represents 1/3 with a diagram or model • Identifies one-half from a region or set* • Identifies 1/4 from a region or set • Identifies 1/3 from a region or set • Identifies 2/3 or 3/3 from a region or set* • Identifies tenths from a region or set* • Identifies a fraction (denominators other than 2, 3, 4, 8, 10) from a region or set • Identifies a decimal on a number line to the tenths place*	• Identifies whole numbers over 999 using base-10 blocks* • Identifies the numeral and written name for whole numbers with a zero between digits to the ten thousands place • Identifies the numeral and written name for whole numbers over 100,000 • Identifies a whole number that comes before and/or after a given number (over 100)* • Identifies halves of a region using nonadjacent parts	• Identifies whole numbers 100 - 999 using 2-D and 3-D models* • Identifies whole numbers over 999 using 2- and 3-D models* • Writes improper fractions and mixed numbers from a visual representation* • Explains different interpretations of fractions (e.g., parts of a whole, parts of a set, and division of whole numbers by whole numbers)* • Represents a decimal to the hundredths place (e.g., three hundredths = 0.03) • Writes a decimal for a shaded region to the tenths place*
Number Sense - Understand Place Value	**Number Sense - Understand Place Value**	**Number Sense - Understand Place Value**
• Identifies whole numbers under 100 given place value terms (e.g., 3 tens and 4 ones = 34) • Identifies the place value and value of each digit in whole numbers through the thousands • Identifies the place value and value of each digit in whole numbers through the hundred thousands • Writes whole numbers in standard and expanded form through the hundreds • Writes whole numbers in standard and expanded form through the thousands	• Writes equivalent forms of whole numbers using place value (e.g., 54 = 4 tens and 14 ones) • Identifies the place value and value of each digit in whole numbers through the billions • Writes whole numbers in standard and expanded form through the hundred thousands • Applies base ten place value concepts with whole numbers to solve problems • Writes whole numbers using place value terms and vice versa	• Writes whole numbers in standard and expanded form through the hundred thousands • Identifies the place value and value of each digit to the tenths* • Applies base ten place value concepts to solve problems using decimals (analysis)*

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	• Identifies the place value and value of each digit to the tenths*	
Number Sense - Recognize and Use U.S. Currency	**Number Sense - Recognize and Use U.S. Currency**	**Number Sense - Recognize and Use U.S. Currency**
• Identifies the value of a collection of coins to $1.00 (without picture of coins) • Adds money with regrouping • Identifies the value of a collection of coins and bills to $10.00 by "counting on" (without picture of money) • Identifies the value of a collection of coins and bills to $100.00 by "counting on"* • Finds equivalent combinations of coins with the same value* • Finds equivalent combinations of dollars and cents with the same value* • Makes change to $1.00 by "counting on" or subtracting	• Finds equivalent combinations of dollars and cents with the same value*	
Number Sense - Compare and Order Numbers	**Number Sense - Compare and Order Numbers**	**Number Sense - Compare and Order Numbers**
• Compares sets of objects and identifies which is equal to, more than, or less than the other (1 to 10 objects)* • Compares whole numbers through 999,999 • Compares whole numbers to 100, using the symbols for 'less than', 'equal to', or 'greater than' (<, =, >) • Compares whole numbers through the thousands using the symbols <, >, or = • Orders whole numbers less than 1000* • Orders whole numbers less than 10,000 • Compares and orders money in decimal form • Compares and orders decimals to the thousandths place (same number of digits after decimal)*	• Compares whole numbers through 999,999 • Compares whole numbers through the billions using the symbols <, >, or =* • Orders whole numbers less than 10,000 • Orders whole numbers a million or greater • Compares fractions (e.g., common denominator, 1 in the numerator, denominator is 2, 3, 4, 6, 8, 10)	• Compares fractions on a number line • Compares fractions greater than or less than a given fraction using visual representations • Compares fractions and mixed numbers • Compares fractions and mixed numbers using symbols
Number Sense - Represent Equivalence of Numbers	**Number Sense - Represent Equivalence of Numbers**	**Number Sense - Represent Equivalence of Numbers**
• Counts and converts to dozens with models* • Writes equivalent forms of whole numbers 11 to 20 using addition (e.g., 14 = 7 + 7)* • Writes equivalent forms of whole numbers using multiplication (e.g., 12 = 4 x 3 = 2 x 6 = 2 x 2 x 3)* • Converts to dozens without models • Matches numeric and visual representation of equivalent fractions	• Converts a basic fractional numeral to lowest terms (e.g., halves, thirds, quarters)* • Writes a terminating decimal as a fraction or mixed number	• Identifies a fractions in lowest terms from a region or set • Identifies eighths, reduced to lowest terms, from a region or set • Expresses "1" in many different ways (e.g., 3/3, 4/4)* • Expresses improper fractions as whole numbers (e.g., 4/2=2)* • Determines simple equivalent fractions using multiples • Expresses a simple fraction as a decimal • Writes a simple mixed fraction as a decimal and vice versa • Writes a fraction or mixed number as a decimal when the denominator is a multiple of 10

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Number Sense - Apply Number Theory Concepts	Number Sense - Apply Number Theory Concepts	Number Sense - Apply Number Theory Concepts
• Distinguishes between odd and even numbers	• Determines multiples of a whole number* • Determines common multiples of whole numbers*	• Recognizes characteristics of odd and even numbers • Determines factors of whole numbers • Determines multiples of a whole number* • Determines common multiples of whole numbers* • Identifies common factors of two or more numbers*
Numerical Operations - Develop Meanings	**Numerical Operations - Develop Meanings**	**Numerical Operations - Develop Meanings**
• Uses a number line to construct subtraction facts with subtrahends and minuends through 20 (whole numbers)* • Adds and subtracts whole numbers using place value • Uses repeated subtraction for division* • Models whole number multiplication and division algorithms (e.g., shows multiplication as repeated addition and division as repeated subtraction) • Demonstrates an understanding of the commutative property of multiplication with simple problems* • Demonstrates an understanding of the zero property of multiplication • Demonstrates an understanding of the multiplicative property of 1 (identity) • Uses models to add and subtract fractions and connect the actions to algorithms*	• Adds and subtracts whole numbers using place value • Uses a number line to model multiplication (whole numbers)* • Models whole number multiplication and division algorithms (e.g., uses physical materials to show 4 groups of 3 objects)* • Demonstrates an understanding of the associative property of addition* • Demonstrates an understanding of the commutative property of addition • Demonstrates an understanding of the zero property of addition (identity) • Demonstrates an understanding of symmetric property applied to basic addition and subtraction facts (e.g., 10 = 2 + 8 is the same as 2 + 8 = 10 or 7 = 10 - 3 is the same as 10 - 3 = 7)* • Demonstrates an understanding of the commutative property of multiplication with simple problems* • Demonstrates an understanding of symmetric property applied to multiplication (e.g., 8 x 4 = 32 is the same as 32 = 8 x 4)* • Recognizes multiplication and division fact families* • Uses models to add and subtract fractions and connect the actions to algorithms*	• Models whole number multiplication and division algorithms (e.g., uses physical materials to show 4 groups of 3 objects)* • Demonstrates an understanding of the inverse relationship between addition and subtraction • Demonstrates an understanding of the commutative property of multiplication with simple problems* • Demonstrates an understanding of the associative property of multiplication • Demonstrates an understanding of the distributive property of multiplication by decomposing a term* • Recognizes multiplication and division fact families*
Numerical Operations - Add and Subtract	**Numerical Operations - Add and Subtract**	**Numerical Operations - Add and Subtract**
• Adds 2-digit to 3-digit number with regrouping • Uses number sense strategies to determine the correct answer for an addition computation* • Adds two 3- and/or 4-digit numbers, with regrouping, with sums over 1000 • Adds multiple-digit numbers, with regrouping, with sums over 1000 • Adds multiple-digit numbers with sums under 1000 • Subtracts 1-digit number from a 2-digit number with regrouping* • Subtracts a 2-digit number from a 2-digit number,	• Instantly recalls basic addition facts with sums to 18 in a table* • Uses reasoning strategies to solve magic squares and related puzzles (addition, whole numbers only) • Adds multiple-digit numbers, with regrouping, with sums over 1000 • Adds multiple-digit numbers with sums under 1000 • Performs mental computation with more than 4 addends • Subtracts 3- or 4-digit numbers with regrouping • Performs mental subtraction with numbers 1000 and	• Uses reasoning strategies to solve magic squares and related puzzles (addition, whole numbers only) • Subtracts numbers with 5 digits or more with regrouping • Uses strategies to determine 2 or more missing digits (addition/subtraction only) • Adds fractions with like denominators without reducing • Adds fractions with like denominators with reducing or converting to a mixed fraction • Adds fractions with unlike denominators without reducing

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with regrouping • Uses strategies for sums and differences with 2-digit numbers (e.g., decomposing, compatible, compensation, partial sums, counting on) • Subtracts a 2-digit number from a 3-digit number with a single regrouping • Subtracts 3- or 4-digit numbers with regrouping • Performs mental subtraction with numbers under 1000 • Performs mental subtraction with numbers 1000 and over • Subtracts multiple-digit numbers with no regrouping* • Subtracts fractions with like denominators without reducing • Adds decimals to the hundredths place (same number of digits) • Adds decimals to the hundredths place in vertical format (not same number of digits)* • Adds decimals to the thousandths place vertically with and without regrouping • Subtracts decimals to the hundredths place (same number of digits) without regrouping • Subtracts decimals to the hundredths place (same number of digits) with regrouping • Subtracts decimals to the thousandths place, vertically, with and without regrouping	over • Subtracts numbers with 5 digits or more with regrouping • Uses strategies to determine 2 or more missing digits (addition/subtraction only) • Adds fractions with like denominators without reducing • Adds simple mixed fractions with unlike denominators (e.g., halves, thirds, fourths, eighths)* • Adds whole numbers and fractions • Subtracts fractions with like denominators without reducing • Subtracts mixed fractions with like denominators with no regrouping • Subtracts whole numbers, fractions, and mixed fractions* • Adds decimals to the hundredths place in vertical format (not same number of digits)* • Adds decimals to the thousandths place horizontally with and without regrouping • Subtracts decimals to the hundredths place (same number of digits) with regrouping • Subtracts decimals to the thousandths place, vertically, with and without regrouping • Subtracts decimals through the hundred-thousandths place, vertically*	• Adds mixed fractions with like denominators • Adds simple mixed fractions with unlike denominators (e.g., halves, thirds, fourths, eighths)* • Subtracts simple fractions with unlike denominators without reducing (e.g., halves, quarters, thirds, eighths)* • Subtracts fractions with unlike denominators without reducing • Subtracts mixed fractions with like denominators with no regrouping • Subtracts mixed fractions with unlike denominators with no regrouping • Adds decimals to the hundredths place in horizontal format (not same number of digits) • Adds decimals to the thousandths place horizontally with and without regrouping • Adds decimals through the hundred-thousandths place • Subtracts decimals to the thousandths place, vertically, with the zero missing in the ones place* • Subtracts decimals to the thousandths place, horizontally, with and without regrouping
Numerical Operations - Multiply and Divide	**Numerical Operations - Multiply and Divide**	**Numerical Operations - Multiply and Divide**
• Instantly recalls basic multiplication facts where one factor is 6-12 and the other factor is 0-12* • Multiplies a 2- or 3-digit number by a 1-digit number with no regrouping • Multiplies a 2-digit number by a 1-digit number with regrouping • Multiplies a 3- or 4-digit number by a 1-digit number • Multiplies a 2-digit number by a 2-digit number with no regrouping* • Multiplies a 3-digit number by a 2-digit number with no regrouping • Performs mental computation with multiplication • Instantly recalls division facts with dividend and divisors less than 10 • Instantly recalls division facts with dividend and divisors less than 13 • Divides a 2-digit number by a 1-digit number with no	• Instantly recalls basic multiplication facts where one factor is 6-12 and the other factor is 0-12* • Instantly recalls basic multiplication and division facts in a table • Multiplies a 2-digit number by a 1-digit number with regrouping • Multiplies a 3- or 4-digit number by a 1-digit number • Multiplies multiple 1-digit numbers • Multiplies a 2-digit number by a 2-digit number with no regrouping* • Multiplies a 2-digit number by a 2-digit number with regrouping • Multiplies a 3-digit number by a 2-digit number with regrouping • Performs mental computation with multiplication • Multiplies a 2- or 3-digit number by multiples of 10 or 100	• Instantly recalls basic multiplication and division facts in a table • Multiplies a 2-digit number by a 2-digit number with regrouping • Multiplies a 3-digit number by a 2-digit number with regrouping • Performs mental computation with multiplication • Multiplies a 3-digit number by a 3-digit number • Multiplies a 4- or more digit number by multiples of 100 or 1000 • Multiplies multiple-digit numbers • Divides a 2-digit number or a 3-digit number by a 1-digit number with a remainder • Performs mental computation with division • Divides a 4-digit number by a 1-digit number with no remainder • Divides a 4-digit number by a 1-digit number with a

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remainder • Uses strategies to determine 1 missing digit (multiplication/division only) • Evaluates numerical expressions using grouping symbols (whole numbers only)	• Multiplies a 3-digit number by a 3-digit number • Instantly recalls division facts with dividend and divisors less than 13 • Divides a 1-digit number by a 1-digit number with a remainder* • Divides a 2-digit number by a 1-digit number with no remainder • Divides a 2-digit number or a 3-digit number by a 1-digit number with a remainder • Performs mental computation with division • Divides a 3-digit number by a 1-digit number with no remainder • Divides a 4-digit number by a 1-digit number with no remainder • Divides a 4-digit number by a 1-digit number with a remainder* • Divides a 2-digit number by a 2-digit number with a remainder • Divides a 3-digit number by a multiple of 10 • Divides a 4-digit number by a 2-digit number • Evaluates numerical expressions using grouping symbols (whole numbers only) • Evaluates a numerical expression involving more than one operation*	remainder* • Divides a 3-digit number by a 2-digit number • Divides a 4-digit number by a 2-digit number • Solves problems using the inverse relationship between multiplication and division • Divides a whole number by a whole number and expresses the remainder as a decimal* • Divides multiple-digit numbers • Uses strategies to determine 2 or more missing digits (multiplication/division only)* • Evaluates a numerical expression involving more than one operation*
Estimation	**Estimation**	**Estimation**
• Rounds 2- and 3- digit whole numbers to the nearest ten • Rounds 3-digit whole numbers to the nearest hundred • Uses rounding to estimate answers to real-world problems involving numbers less than 1000 with addition and subtraction (whole numbers only)* • Uses front end digits to estimate answers in addition and subtraction computations (whole numbers only)* • Uses rounding to estimate answers to addition and subtraction problems (whole numbers only) • Uses rounding to estimate answers to 1-step problems involving answers less than $1 (whole numbers only, e.g., 10 cents + 10 cents)* • Uses rounding to estimate answers to 1-step problems involving answers less than $20 (decimals only, e.g., $1.20 + $2.75)	• Rounds 4-, 5-, and 6-digit whole numbers to the nearest ten • Rounds 4-, 5-, and 6-digit whole numbers to the nearest hundred • Rounds 4-, 5-, and 6-digit whole numbers to the nearest thousand • Rounds whole numbers to the nearest hundred thousand • Explains the rules for rounding* • Rounds decimals to the nearest whole number* • Uses rounding to estimate answers to real-world problems involving numbers 1000 or greater with addition and subtraction (whole numbers only)* • Uses front end digits to estimate answers in addition and subtraction computations (whole numbers only)* • Uses front end estimation for multiplication and division computations (whole numbers only)* • Uses rounding to estimate answers to addition and subtraction problems (whole numbers only)	• Rounds 4-, 5-, and 6-digit whole numbers to the nearest hundred • Rounds 4-, 5-, and 6-digit whole numbers to the nearest thousand • Rounds 4-, 5-, and 6-digit whole numbers to the nearest ten thousand • Rounds decimals to the nearest whole number* • Rounds decimals to the nearest tenth • Uses rounding to estimate answers to real-world problems involving multiplication and division of numbers less than 100 (whole numbers only)* • Uses rounding to estimate answers to real-world problems involving numbers less than 1000 with multiplication and division (whole numbers only)* • Uses rounding to estimate answers to real-world problems involving numbers 1000 or greater using multiplication and division (whole numbers only)* • Uses rounding to estimate answers to difficult multiplication and division problems (whole numbers

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	• Uses rounding to estimate answers to simple multiplication and division problems (whole numbers only) • Uses rounding to estimate answers to 1-step problems involving answers $20 or greater (using decimals)* • Uses rounding to estimate answers to 2-step problems involving money (whole numbers only)* • Uses rounding to estimate answers to 2-step problems involving money (using decimals)	only) • Uses rounding to estimate answers to 1-step problems involving answers $20 or greater (using decimals)* • Uses rounding to estimate answers to 2-step problems involving money (using decimals) • Uses referent numbers to estimate answers when adding and subtracting fractions and mixed numbers* • Predicts the relative size of the answer when adding whole numbers* • Predicts the relative size of the answer when subtracting whole numbers* • Predicts the relative size of the answer when computing with 10's, 100's, 1000's • Predicts the relative size of the answer when multiplying whole numbers
New Vocabulary: billion, hundred million, hundredths, quintillion, standard numeral, symbol, thousands, trillion, zero	*New Vocabulary:* biggest, column, common multiple, compatible numbers, expanded numeral, hundred thousands, hundredth, inverse operation, kilowatt, magic square, multiple, place value, ten thousands, twice	*New Vocabulary:* common factor, decimal, decimal form, decimal point, negative, positive, proof
New Signs and Symbols: ≈ approximately equal to, > greater than, ≥ greater than or equal to, < less than, ≤ less than or equal to, R remainder	*New Signs and Symbols:* ? a variable, − negative number	*New Signs and Symbols:* ≠ not equal to, % percent

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Subject: Mathematics
Goal Strand: Number and Numerical Operations
RIT Score Range: 211 - 220

Skills and Concepts to Enhance 201 - 210	Skills and Concepts to Develop 211 - 220	Skills and Concepts to Introduce 221 - 230
Number Sense - Construct Meaning	**Number Sense - Construct Meaning**	**Number Sense - Construct Meaning**
• Identifies whole numbers over 999 using base-10 blocks* • Identifies the numeral and written name for whole numbers with a zero between digits to the ten thousands place • Identifies the numeral and written name for whole numbers over 100,000 • Identifies a whole number that comes before and/or after a given number (over 100)* • Identifies halves of a region using nonadjacent parts	• Identifies whole numbers 100 - 999 using 2-D and 3-D models* • Identifies whole numbers over 999 using 2- and 3-D models* • Writes improper fractions and mixed numbers from a visual representation* • Explains different interpretations of fractions (e.g., parts of a whole, parts of a set, and division of whole numbers by whole numbers)* • Represents a decimal to the hundredths place (e.g., three hundredths = 0.03) • Writes a decimal for a shaded region to the tenths place*	• Uses alternative algorithms to explain the meaning of "fraction"* • Represents a decimal to thousandths place (e.g., three thousandths = 0.003) • Represents a decimal to the hundred thousandths place - (e.g., three hundred thousandths = 0. 00003)* • Writes a decimal for a shaded region to the hundredths place
Number Sense - Understand Place Value	**Number Sense - Understand Place Value**	**Number Sense - Understand Place Value**
• Writes equivalent forms of whole numbers using place value (e.g., 54 = 4 tens and 14 ones) • Identifies the place value and value of each digit in whole numbers through the billions • Writes whole numbers in standard and expanded form through the hundred thousands • Applies base ten place value concepts with whole numbers to solve problems • Writes whole numbers using place value terms and vice versa • Identifies the place value and value of each digit to the tenths*	• Writes whole numbers in standard and expanded form through the hundred thousands • Identifies the place value and value of each digit to the tenths* • Applies base ten place value concepts to solve problems using decimals (analysis)*	• Writes equivalent forms of whole numbers using place value (numbers 100 or greater) (e.g., 253 = 2 hundreds, 5 tens, and 3 ones) • Writes whole numbers in standard and exponential form • Identifies the place value and value of each digit to the hundredths and thousandths • Identifies the place value and value of each digit in numbers through the ten thousandths and beyond
Number Sense - Recognize and Use U.S. Currency	**Number Sense - Recognize and Use U.S. Currency**	**Number Sense - Recognize and Use U.S. Currency**
• Finds equivalent combinations of dollars and cents with the same value*		
Number Sense - Compare and Order Numbers	**Number Sense - Compare and Order Numbers**	**Number Sense - Compare and Order Numbers**
• Compares whole numbers through 999,999 • Compares whole numbers through the billions using the symbols <, >, or =* • Orders whole numbers less than 10,000 • Orders whole numbers a million or greater	• Compares fractions on a number line • Compares fractions greater than or less than a given fraction using visual representations • Compares fractions and mixed numbers • Compares fractions and mixed numbers using symbols	• Determines the relative magnitude of whole numbers* • Orders whole numbers a million or greater using < or > symbols* • Compares fractions (e.g., comparing numerators and denominators)

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• Compares fractions (e.g., common denominator, 1 in the numerator, denominator is 2, 3, 4, 6, 8, 10)		• Orders fractions on a number line* • Compares and orders decimals to the hundredths place (not same number of digits after decimal)* • Compares and orders decimals to the thousandths place (not same number of digits after decimal) • Compares and orders decimals past the thousandths place* • Orders fractions and decimals to the hundred thousandths
Number Sense - Represent Equivalence of Numbers	**Number Sense - Represent Equivalence of Numbers**	**Number Sense - Represent Equivalence of Numbers**
• Converts a basic fractional numeral to lowest terms (e.g., halves, thirds, quarters)* • Writes a terminating decimal as a fraction or mixed number	• Identifies a fractions in lowest terms from a region or set • Identifies eighths, reduced to lowest terms, from a region or set • Expresses "1" in many different ways (e.g., 3/3, 4/4)* • Expresses improper fractions as whole numbers (e.g., 4/2=2)* • Determines simple equivalent fractions using multiples • Expresses a simple fraction as a decimal • Writes a simple mixed fraction as a decimal and vice versa • Writes a fraction or mixed number as a decimal when the denominator is a multiple of 10	• Identifies a fractions in lowest terms from a region or set • Determines simple equivalent fractions using multiples • Writes a simple mixed fraction as a decimal and vice versa • Writes a fraction or mixed number as a decimal when the denominator is a multiple of 10
Number Sense - Apply Number Theory Concepts	**Number Sense - Apply Number Theory Concepts**	**Number Sense - Apply Number Theory Concepts**
• Determines multiples of a whole number* • Determines common multiples of whole numbers*	• Recognizes characteristics of odd and even numbers • Determines factors of whole numbers • Determines multiples of a whole number* • Determines common multiples of whole numbers* • Identifies common factors of two or more numbers*	• Recognizes characteristics of odd and even numbers • Determines factors of whole numbers • Identifies common factors of two or more numbers*
Numerical Operations - Develop Meanings	**Numerical Operations - Develop Meanings**	**Numerical Operations - Develop Meanings**
• Adds and subtracts whole numbers using place value • Uses a number line to model multiplication (whole numbers)* • Models whole number multiplication and division algorithms (e.g., uses physical materials to show 4 groups of 3 objects)* • Demonstrates an understanding of the associative property of addition* • Demonstrates an understanding of the commutative property of addition • Demonstrates an understanding of the zero property of addition (identity) • Demonstrates an understanding of symmetric property	• Models whole number multiplication and division algorithms (e.g., uses physical materials to show 4 groups of 3 objects)* • Demonstrates an understanding of the inverse relationship between addition and subtraction • Demonstrates an understanding of the commutative property of multiplication with simple problems* • Demonstrates an understanding of the associative property of multiplication • Demonstrates an understanding of the distributive property of multiplication by decomposing a term* • Recognizes multiplication and division fact families*	• Models algorithms using place value concepts (addition and subtraction with whole numbers)* • Models algorithms using place value concepts (multiplication and division with whole numbers)* • Demonstrates an understanding of the commutative property of multiplication with complex problems (e.g., parenthesis, 3 factors) • Demonstrates an understanding of multiple properties

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applied to basic addition and subtraction facts (e.g., 10 = 2 + 8 is the same as 2 + 8 = 10 or 7 = 10 - 3 is the same as 10 - 3 = 7)* • Demonstrates an understanding of the commutative property of multiplication with simple problems* • Demonstrates an understanding of symmetric property applied to multiplication (e.g., 8 x 4 = 32 is the same as 32 = 8 x 4)* • Recognizes multiplication and division fact families* • Uses models to add and subtract fractions and connect the actions to algorithms*		
Numerical Operations - Add and Subtract	**Numerical Operations - Add and Subtract**	**Numerical Operations - Add and Subtract**
• Instantly recalls basic addition facts with sums to 18 in a table* • Uses reasoning strategies to solve magic squares and related puzzles (addition, whole numbers only) • Adds multiple-digit numbers, with regrouping, with sums over 1000 • Adds multiple-digit numbers with sums under 1000 • Performs mental computation with more than 4 addends • Subtracts 3- or 4-digit numbers with regrouping • Performs mental subtraction with numbers 1000 and over • Subtracts numbers with 5 digits or more with regrouping • Uses strategies to determine 2 or more missing digits (addition/subtraction only) • Adds fractions with like denominators without reducing • Adds simple mixed fractions with unlike denominators (e.g., halves, thirds, fourths, eighths)* • Adds whole numbers and fractions • Subtracts fractions with like denominators without reducing • Subtracts mixed fractions with like denominators with no regrouping • Subtracts whole numbers, fractions, and mixed fractions* • Adds decimals to the hundredths place in vertical format (not same number of digits)* • Adds decimals to the thousandths place horizontally with and without regrouping • Subtracts decimals to the hundredths place (same	• Uses reasoning strategies to solve magic squares and related puzzles (addition, whole numbers only) • Subtracts numbers with 5 digits or more with regrouping • Uses strategies to determine 2 or more missing digits (addition/subtraction only) • Adds fractions with like denominators without reducing • Adds fractions with like denominators with reducing or converting to a mixed fraction • Adds fractions with unlike denominators without reducing • Adds mixed fractions with like denominators • Adds simple mixed fractions with unlike denominators (e.g., halves, thirds, fourths, eighths)* • Subtracts simple fractions with unlike denominators without reducing (e.g., halves, quarters, thirds, eighths)* • Subtracts fractions with unlike denominators without reducing • Subtracts mixed fractions with like denominators with no regrouping • Subtracts mixed fractions with unlike denominators with no regrouping • Adds decimals to the hundredths place in horizontal format (not same number of digits) • Adds decimals to the thousandths place horizontally with and without regrouping • Adds decimals through the hundred-thousandths place • Subtracts decimals to the thousandths place, vertically, with the zero missing in the ones place* • Subtracts decimals to the thousandths place,	• Adds fractions with like denominators with reducing or converting to a mixed fraction • Adds fractions with unlike denominators without reducing • Adds fractions with unlike denominators with reducing or converting to a mixed fraction • Adds whole numbers, fractions, and mixed fractions without reducing • Adds mixed fractions where converting from improper fractions is necessary • Subtracts fractions with like denominators with reducing • Subtracts fractions with unlike denominators without reducing • Subtracts fractions with unlike denominators with reducing* • Subtracts mixed fractions with unlike denominators with no regrouping • Subtracts whole numbers, fractions, and mixed fractions with regrouping • Adds decimals to the hundredths place in horizontal format (not same number of digits) • Adds decimals through the hundred-thousandths place • Subtracts decimals to the hundredths place (not same number of digits) • Subtracts decimals to the thousandths place, horizontally, with and without regrouping • Subtracts decimals through the hundred-thousandths place, horizontally • Subtracts a decimal from a whole number, horizontally

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number of digits) with regrouping • Subtracts decimals to the thousandths place, vertically, with and without regrouping • Subtracts decimals through the hundred-thousandths place, vertically*	horizontally, with and without regrouping	
Numerical Operations - Multiply and Divide	**Numerical Operations - Multiply and Divide**	**Numerical Operations - Multiply and Divide**
• Instantly recalls basic multiplication facts where one factor is 6-12 and the other factor is 0-12* • Instantly recalls basic multiplication and division facts in a table • Multiplies a 2-digit number by a 1-digit number with regrouping • Multiplies a 3- or 4-digit number by a 1-digit number • Multiplies multiple 1-digit numbers • Multiplies a 2-digit number by a 2-digit number with no regrouping* • Multiplies a 2-digit number by a 2-digit number with regrouping • Multiplies a 3-digit number by a 2-digit number with regrouping • Performs mental computation with multiplication • Multiplies a 2- or 3-digit number by multiples of 10 or 100 • Multiplies a 3-digit number by a 3-digit number • Instantly recalls division facts with dividend and divisors less than 13 • Divides a 1-digit number by a 1-digit number with a remainder* • Divides a 2-digit number by a 1-digit number with no remainder • Divides a 2-digit number or a 3-digit number by a 1-digit number with a remainder • Performs mental computation with division • Divides a 3-digit number by a 1-digit number with no remainder • Divides a 4-digit number by a 1-digit number with no remainder • Divides a 4-digit number by a 1-digit number with a remainder* • Divides a 2-digit number by a 2-digit number with a remainder • Divides a 3-digit number by a multiple of 10 • Divides a 4-digit number by a 2-digit number • Evaluates numerical expressions using grouping	• Instantly recalls basic multiplication and division facts in a table • Multiplies a 2-digit number by a 2-digit number with regrouping • Multiplies a 3-digit number by a 2-digit number with regrouping • Performs mental computation with multiplication • Multiplies a 3-digit number by a 3-digit number • Multiplies a 4- or more digit number by multiples of 100 or 1000 • Multiplies multiple-digit numbers • Divides a 2-digit number or a 3-digit number by a 1-digit number with a remainder • Performs mental computation with division • Divides a 4-digit number by a 1-digit number with no remainder • Divides a 4-digit number by a 1-digit number with a remainder* • Divides a 3-digit number by a 2-digit number • Divides a 4-digit number by a 2-digit number • Solves problems using the inverse relationship between multiplication and division • Divides a whole number by a whole number and expresses the remainder as a decimal* • Divides multiple-digit numbers • Uses strategies to determine 2 or more missing digits (multiplication/division only)* • Evaluates a numerical expression involving more than one operation*	• Uses multiplication strategies to explain computation (e.g., doubles, 9-patterns, decomposing, partial products)* • Multiplies multiple-digit numbers • Divides a 4-digit number by a 2-digit number • Divides multiple-digit numbers • Divides numbers by powers of 10*

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symbols (whole numbers only) • Evaluates a numerical expression involving more than one operation*		
Estimation	**Estimation**	**Estimation**
• Rounds 4-, 5-, and 6-digit whole numbers to the nearest ten • Rounds 4-, 5-, and 6-digit whole numbers to the nearest hundred • Rounds 4-, 5-, and 6-digit whole numbers to the nearest thousand • Rounds whole numbers to the nearest hundred thousand • Explains the rules for rounding* • Rounds decimals to the nearest whole number* • Uses rounding to estimate answers to real-world problems involving numbers 1000 or greater with addition and subtraction (whole numbers only)* • Uses front end digits to estimate answers in addition and subtraction computations (whole numbers only)* • Uses front end estimation for multiplication and division computations (whole numbers only)* • Uses rounding to estimate answers to addition and subtraction problems (whole numbers only) • Uses rounding to estimate answers to simple multiplication and division problems (whole numbers only) • Uses rounding to estimate answers to 1-step problems involving answers $20 or greater (using decimals)* • Uses rounding to estimate answers to 2-step problems involving money (whole numbers only)* • Uses rounding to estimate answers to 2-step problems involving money (using decimals)	• Rounds 4-, 5-, and 6-digit whole numbers to the nearest hundred • Rounds 4-, 5-, and 6-digit whole numbers to the nearest thousand • Rounds 4-, 5-, and 6-digit whole numbers to the nearest ten thousand • Rounds decimals to the nearest whole number* • Rounds decimals to the nearest tenth • Uses rounding to estimate answers to real-world problems involving multiplication and division of numbers less than 100 (whole numbers only)* • Uses rounding to estimate answers to real-world problems involving numbers less than 1000 with multiplication and division (whole numbers only)* • Uses rounding to estimate answers to real-world problems involving numbers 1000 or greater using multiplication and division (whole numbers only)* • Uses rounding to estimate answers to difficult multiplication and division problems (whole numbers only) • Uses rounding to estimate answers to 1-step problems involving answers $20 or greater (using decimals)* • Uses rounding to estimate answers to 2-step problems involving money (using decimals) • Uses referent numbers to estimate answers when adding and subtracting fractions and mixed numbers* • Predicts the relative size of the answer when adding whole numbers* • Predicts the relative size of the answer when subtracting whole numbers* • Predicts the relative size of the answer when computing with 10's, 100's, 1000's • Predicts the relative size of the answer when multiplying whole numbers	• Rounds whole numbers to the nearest million* • Rounds wholes numbers to the nearest billion* • Rounds decimals to the nearest hundredth • Uses rounding to estimate answers to real-world problems involving multiplication and division of numbers less than 100 (whole numbers only)* • Uses rounding to estimate answers to real-world problems involving numbers less than 1000 with multiplication and division (whole numbers only)* • Uses rounding to estimate answers to real-world problems involving numbers 1000 or greater using multiplication and division (whole numbers only)* • Uses rounding to estimate answers to real-world problems involving fractions and mixed numbers* • Uses estimation to solve problems involving fractions and mixed numbers • Predicts the relative size of the answer when adding whole numbers* • Predicts the relative size of the answer when subtracting whole numbers* • Predicts the relative size of the answer when dividing whole numbers
New Vocabulary: biggest, column, common multiple, compatible numbers, expanded numeral, hundred thousands, hundredth, inverse operation, kilowatt, magic square, multiple, place value, ten thousands, twice	*New Vocabulary:* common factor, decimal, decimal form, decimal point, negative, positive, proof	*New Vocabulary:* borrow, compute, expanded notation, exponent, ten million, ten thousandth, tenths, thousandths
New Signs and Symbols: ? a variable, − negative number	*New Signs and Symbols:* ≠ not equal to, % percent	*New Signs and Symbols:* lb pound, # number, × multiplication, = is equal to

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Subject: Mathematics
Goal Strand: Number and Numerical Operations
RIT Score Range: 221 - 230

Skills and Concepts to Enhance 211 - 220	Skills and Concepts to Develop 221 - 230	Skills and Concepts to Introduce 231 - 240
Number Sense - Construct Meaning	**Number Sense - Construct Meaning**	**Number Sense - Construct Meaning**
• Identifies whole numbers 100 - 999 using 2-D and 3-D models* • Identifies whole numbers over 999 using 2- and 3-D models* • Writes improper fractions and mixed numbers from a visual representation* • Explains different interpretations of fractions (e.g., parts of a whole, parts of a set, and division of whole numbers by whole numbers)* • Represents a decimal to the hundredths place (e.g., three hundredths = 0.03) • Writes a decimal for a shaded region to the tenths place*	• Uses alternative algorithms to explain the meaning of "fraction"* • Represents a decimal to thousandths place (e.g., three thousandths = 0.003) • Represents a decimal to the hundred thousandths place - (e.g., three hundred thousandths = 0. 00003)* • Writes a decimal for a shaded region to the hundredths place	
Number Sense - Understand Place Value	**Number Sense - Understand Place Value**	**Number Sense - Understand Place Value**
• Writes whole numbers in standard and expanded form through the hundred thousands • Identifies the place value and value of each digit to the tenths* • Applies base ten place value concepts to solve problems using decimals (analysis)*	• Writes equivalent forms of whole numbers using place value (numbers 100 or greater) (e.g., 253 = 2 hundreds, 5 tens, and 3 ones) • Writes whole numbers in standard and exponential form • Identifies the place value and value of each digit to the hundredths and thousandths • Identifies the place value and value of each digit in numbers through the ten thousandths and beyond	• Writes whole numbers in standard and exponential form
Number Sense - Recognize and Use U.S. Currency	**Number Sense - Recognize and Use U.S. Currency**	**Number Sense - Recognize and Use U.S. Currency**
Number Sense - Compare and Order Numbers	**Number Sense - Compare and Order Numbers**	**Number Sense - Compare and Order Numbers**
• Compares fractions on a number line • Compares fractions greater than or less than a given fraction using visual representations • Compares fractions and mixed numbers • Compares fractions and mixed numbers using symbols	• Determines the relative magnitude of whole numbers* • Orders whole numbers a million or greater using < or > symbols* • Compares fractions (e.g., comparing numerators and denominators) • Orders fractions on a number line* • Compares and orders decimals to the hundredths place (not same number of digits after decimal)* • Compares and orders decimals to the thousandths	• Compares fractions (e.g., comparing numerators and denominators) • Compares and orders decimal and fractional coordinates on a number line*

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	place (not same number of digits after decimal) • Compares and orders decimals past the thousandths place* • Orders fractions and decimals to the hundred thousandths	
Number Sense - Represent Equivalence of Numbers	**Number Sense - Represent Equivalence of Numbers**	**Number Sense - Represent Equivalence of Numbers**
• Identifies a fractions in lowest terms from a region or set • Identifies eighths, reduced to lowest terms, from a region or set • Expresses "1" in many different ways (e.g., 3/3, 4/4)* • Expresses improper fractions as whole numbers (e.g., 4/2=2)* • Determines simple equivalent fractions using multiples • Expresses a simple fraction as a decimal • Writes a simple mixed fraction as a decimal and vice versa • Writes a fraction or mixed number as a decimal when the denominator is a multiple of 10	• Identifies a fractions in lowest terms from a region or set • Determines simple equivalent fractions using multiples • Writes a simple mixed fraction as a decimal and vice versa • Writes a fraction or mixed number as a decimal when the denominator is a multiple of 10	
Number Sense - Apply Number Theory Concepts	**Number Sense - Apply Number Theory Concepts**	**Number Sense - Apply Number Theory Concepts**
• Recognizes characteristics of odd and even numbers • Determines factors of whole numbers • Determines multiples of a whole number* • Determines common multiples of whole numbers* • Identifies common factors of two or more numbers*	• Recognizes characteristics of odd and even numbers • Determines factors of whole numbers • Identifies common factors of two or more numbers*	
Numerical Operations - Develop Meanings	**Numerical Operations - Develop Meanings**	**Numerical Operations - Develop Meanings**
• Models whole number multiplication and division algorithms (e.g., uses physical materials to show 4 groups of 3 objects)* • Demonstrates an understanding of the inverse relationship between addition and subtraction • Demonstrates an understanding of the commutative property of multiplication with simple problems* • Demonstrates an understanding of the associative property of multiplication • Demonstrates an understanding of the distributive property of multiplication by decomposing a term* • Recognizes multiplication and division fact families*	• Models algorithms using place value concepts (addition and subtraction with whole numbers)* • Models algorithms using place value concepts (multiplication and division with whole numbers)* • Demonstrates an understanding of the commutative property of multiplication with complex problems (e.g., parenthesis, 3 factors) • Demonstrates an understanding of multiple properties	• Models algorithms using place value concepts (addition and subtraction with whole numbers)* • Models algorithms using place value concepts (multiplication and division with whole numbers)*
Numerical Operations - Add and Subtract	**Numerical Operations - Add and Subtract**	**Numerical Operations - Add and Subtract**
• Uses reasoning strategies to solve magic squares and related puzzles (addition, whole numbers only) • Subtracts numbers with 5 digits or more with regrouping	• Adds fractions with like denominators with reducing or converting to a mixed fraction • Adds fractions with unlike denominators without reducing	• Adds fractions with unlike denominators with reducing or converting to a mixed fraction • Adds whole numbers, fractions, and mixed fractions without reducing

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• Uses strategies to determine 2 or more missing digits (addition/subtraction only) • Adds fractions with like denominators without reducing • Adds fractions with like denominators with reducing or converting to a mixed fraction • Adds fractions with unlike denominators without reducing • Adds mixed fractions with like denominators • Adds simple mixed fractions with unlike denominators (e.g., halves, thirds, fourths, eighths)* • Subtracts simple fractions with unlike denominators without reducing (e.g., halves, quarters, thirds, eighths)* • Subtracts fractions with unlike denominators without reducing • Subtracts mixed fractions with like denominators with no regrouping • Subtracts mixed fractions with unlike denominators with no regrouping • Adds decimals to the hundredths place in horizontal format (not same number of digits) • Adds decimals to the thousandths place horizontally with and without regrouping • Adds decimals through the hundred-thousandths place • Subtracts decimals to the thousandths place, vertically, with the zero missing in the ones place* • Subtracts decimals to the thousandths place, horizontally, with and without regrouping	• Adds fractions with unlike denominators with reducing or converting to a mixed fraction • Adds whole numbers, fractions, and mixed fractions without reducing • Adds mixed fractions where converting from improper fractions is necessary • Subtracts fractions with like denominators with reducing • Subtracts fractions with unlike denominators without reducing • Subtracts fractions with unlike denominators with reducing* • Subtracts mixed fractions with unlike denominators with no regrouping • Subtracts whole numbers, fractions, and mixed fractions with regrouping • Adds decimals to the hundredths place in horizontal format (not same number of digits) • Adds decimals through the hundred-thousandths place • Subtracts decimals to the hundredths place (not same number of digits) • Subtracts decimals to the thousandths place, horizontally, with and without regrouping • Subtracts decimals through the hundred-thousandths place, horizontally • Subtracts a decimal from a whole number, horizontally	• Adds mixed fractions where converting from improper fractions is necessary • Subtracts whole numbers, fractions, and mixed fractions with regrouping • Subtracts a decimal from a whole number, horizontally
Numerical Operations - Multiply and Divide	**Numerical Operations - Multiply and Divide**	**Numerical Operations - Multiply and Divide**
• Instantly recalls basic multiplication and division facts in a table • Multiplies a 2-digit number by a 2-digit number with regrouping • Multiplies a 3-digit number by a 2-digit number with regrouping • Performs mental computation with multiplication • Multiplies a 3-digit number by a 3-digit number • Multiplies a 4- or more digit number by multiples of 100 or 1000 • Multiplies multiple-digit numbers • Divides a 2-digit number or a 3-digit number by a 1-digit number with a remainder • Performs mental computation with division	• Uses multiplication strategies to explain computation (e.g., doubles, 9-patterns, decomposing, partial products)* • Multiplies multiple-digit numbers • Divides a 4-digit number by a 2-digit number • Divides multiple-digit numbers • Divides numbers by powers of 10*	• Divides multiple-digit numbers • Uses appropriate algorithms to represent multiplication or division with whole numbers* • Evaluates numerical expressions using the order of operations (whole numbers only) • Evaluates expressions using the order of operations, including exponents (whole numbers only)

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.

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• Divides a 4-digit number by a 1-digit number with no remainder • Divides a 4-digit number by a 1-digit number with a remainder* • Divides a 3-digit number by a 2-digit number • Divides a 4-digit number by a 2-digit number • Solves problems using the inverse relationship between multiplication and division • Divides a whole number by a whole number and expresses the remainder as a decimal* • Divides multiple-digit numbers • Uses strategies to determine 2 or more missing digits (multiplication/division only)* • Evaluates a numerical expression involving more than one operation*		
Estimation	**Estimation**	**Estimation**
• Rounds 4-, 5-, and 6-digit whole numbers to the nearest hundred • Rounds 4-, 5-, and 6-digit whole numbers to the nearest thousand • Rounds 4-, 5-, and 6-digit whole numbers to the nearest ten thousand • Rounds decimals to the nearest whole number* • Rounds decimals to the nearest tenth • Uses rounding to estimate answers to real-world problems involving multiplication and division of numbers less than 100 (whole numbers only)* • Uses rounding to estimate answers to real-world problems involving numbers less than 1000 with multiplication and division (whole numbers only)* • Uses rounding to estimate answers to real-world problems involving numbers 1000 or greater using multiplication and division (whole numbers only)* • Uses rounding to estimate answers to difficult multiplication and division problems (whole numbers only) • Uses rounding to estimate answers to 1-step problems involving answers $20 or greater (using decimals)* • Uses rounding to estimate answers to 2-step problems involving money (using decimals) • Uses referent numbers to estimate answers when adding and subtracting fractions and mixed numbers* • Predicts the relative size of the answer when adding whole numbers*	• Rounds whole numbers to the nearest million* • Rounds wholes numbers to the nearest billion* • Rounds decimals to the nearest hundredth • Uses rounding to estimate answers to real-world problems involving multiplication and division of numbers less than 100 (whole numbers only)* • Uses rounding to estimate answers to real-world problems involving numbers less than 1000 with multiplication and division (whole numbers only)* • Uses rounding to estimate answers to real-world problems involving numbers 1000 or greater using multiplication and division (whole numbers only)* • Uses rounding to estimate answers to real-world problems involving fractions and mixed numbers* • Uses estimation to solve problems involving fractions and mixed numbers • Predicts the relative size of the answer when adding whole numbers* • Predicts the relative size of the answer when subtracting whole numbers* • Predicts the relative size of the answer when dividing whole numbers	• Rounds decimals to the nearest hundredth • Rounds decimals to nearest thousandth* • Rounds decimals to nearest ten-thousandth* • Uses estimation to solve problems involving decimals • Determines the most accurate answer (fractions only)* • Predicts the relative size of the answer when dividing a smaller whole number by a larger whole number • Describes the effects of multiplying a number by a number between 0 and 1*

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• Predicts the relative size of the answer when subtracting whole numbers* • Predicts the relative size of the answer when computing with 10's, 100's, 1000's • Predicts the relative size of the answer when multiplying whole numbers		
New Vocabulary: common factor, decimal, decimal form, decimal point, negative, positive, proof	*New Vocabulary:* borrow, compute, expanded notation, exponent, ten million, ten thousandth, tenths, thousandths	*New Vocabulary:* none
New Signs and Symbols: ≠ not equal to, % percent	*New Signs and Symbols:* lb pound, # number, × multiplication, = is equal to	*New Signs and Symbols:* • multiplication symbol (dot)

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
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Subject: Mathematics
Goal Strand: Number and Numerical Operations
RIT Score Range: 231 - 240

Skills and Concepts to Enhance 221 - 230	Skills and Concepts to Develop 231 - 240	Skills and Concepts to Introduce Above 240
Number Sense - Construct Meaning	**Number Sense - Construct Meaning**	**Number Sense - Construct Meaning**
• Uses alternative algorithms to explain the meaning of "fraction"* • Represents a decimal to thousandths place (e.g., three thousandths = 0.003) • Represents a decimal to the hundred thousandths place - (e.g., three hundred thousandths = 0. 00003)* • Writes a decimal for a shaded region to the hundredths place		
Number Sense - Understand Place Value	**Number Sense - Understand Place Value**	**Number Sense - Understand Place Value**
• Writes equivalent forms of whole numbers using place value (numbers 100 or greater) (e.g., 253 = 2 hundreds, 5 tens, and 3 ones) • Writes whole numbers in standard and exponential form • Identifies the place value and value of each digit to the hundredths and thousandths • Identifies the place value and value of each digit in numbers through the ten thousandths and beyond	• Writes whole numbers in standard and exponential form	
Number Sense - Recognize and Use U.S. Currency	**Number Sense - Recognize and Use U.S. Currency**	**Number Sense - Recognize and Use U.S. Currency**
Number Sense - Compare and Order Numbers	**Number Sense - Compare and Order Numbers**	**Number Sense - Compare and Order Numbers**
• Determines the relative magnitude of whole numbers* • Orders whole numbers a million or greater using < or > symbols* • Compares fractions (e.g., comparing numerators and denominators) • Orders fractions on a number line* • Compares and orders decimals to the hundredths place (not same number of digits after decimal)* • Compares and orders decimals to the thousandths place (not same number of digits after decimal) • Compares and orders decimals past the thousandths place* • Orders fractions and decimals to the hundred thousandths	• Compares fractions (e.g., comparing numerators and denominators) • Compares and orders decimal and fractional coordinates on a number line*	

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Number Sense - Represent Equivalence of Numbers	Number Sense - Represent Equivalence of Numbers	Number Sense - Represent Equivalence of Numbers
• Identifies a fractions in lowest terms from a region or set • Determines simple equivalent fractions using multiples • Writes a simple mixed fraction as a decimal and vice versa • Writes a fraction or mixed number as a decimal when the denominator is a multiple of 10		
Number Sense - Apply Number Theory Concepts	**Number Sense - Apply Number Theory Concepts**	**Number Sense - Apply Number Theory Concepts**
• Recognizes characteristics of odd and even numbers • Determines factors of whole numbers • Identifies common factors of two or more numbers*		
Numerical Operations - Develop Meanings	**Numerical Operations - Develop Meanings**	**Numerical Operations - Develop Meanings**
• Models algorithms using place value concepts (addition and subtraction with whole numbers)* • Models algorithms using place value concepts (multiplication and division with whole numbers)* • Demonstrates an understanding of the commutative property of multiplication with complex problems (e.g., parenthesis, 3 factors) • Demonstrates an understanding of multiple properties	• Models algorithms using place value concepts (addition and subtraction with whole numbers)* • Models algorithms using place value concepts (multiplication and division with whole numbers)*	
Numerical Operations - Add and Subtract	**Numerical Operations - Add and Subtract**	**Numerical Operations - Add and Subtract**
• Adds fractions with like denominators with reducing or converting to a mixed fraction • Adds fractions with unlike denominators without reducing • Adds fractions with unlike denominators with reducing or converting to a mixed fraction • Adds whole numbers, fractions, and mixed fractions without reducing • Adds mixed fractions where converting from improper fractions is necessary • Subtracts fractions with like denominators with reducing • Subtracts fractions with unlike denominators without reducing • Subtracts fractions with unlike denominators with reducing* • Subtracts mixed fractions with unlike denominators with no regrouping • Subtracts whole numbers, fractions, and mixed fractions with regrouping • Adds decimals to the hundredths place in horizontal	• Adds fractions with unlike denominators with reducing or converting to a mixed fraction • Adds whole numbers, fractions, and mixed fractions without reducing • Adds mixed fractions where converting from improper fractions is necessary • Subtracts whole numbers, fractions, and mixed fractions with regrouping • Subtracts a decimal from a whole number, horizontally	

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format (not same number of digits) • Adds decimals through the hundred-thousandths place • Subtracts decimals to the hundredths place (not same number of digits) • Subtracts decimals to the thousandths place, horizontally, with and without regrouping • Subtracts decimals through the hundred-thousandths place, horizontally • Subtracts a decimal from a whole number, horizontally		
Numerical Operations - Multiply and Divide	**Numerical Operations - Multiply and Divide**	**Numerical Operations - Multiply and Divide**
• Uses multiplication strategies to explain computation (e.g., doubles, 9-patterns, decomposing, partial products)* • Multiplies multiple-digit numbers • Divides a 4-digit number by a 2-digit number • Divides multiple-digit numbers • Divides numbers by powers of 10*	• Divides multiple-digit numbers • Uses appropriate algorithms to represent multiplication or division with whole numbers* • Evaluates numerical expressions using the order of operations (whole numbers only) • Evaluates expressions using the order of operations, including exponents (whole numbers only)	• Evaluates expressions using the order of operations, including exponents (whole numbers only)
Estimation	**Estimation**	**Estimation**
• Rounds whole numbers to the nearest million* • Rounds wholes numbers to the nearest billion* • Rounds decimals to the nearest hundredth • Uses rounding to estimate answers to real-world problems involving multiplication and division of numbers less than 100 (whole numbers only)* • Uses rounding to estimate answers to real-world problems involving numbers less than 1000 with multiplication and division (whole numbers only)* • Uses rounding to estimate answers to real-world problems involving numbers 1000 or greater using multiplication and division (whole numbers only)* • Uses rounding to estimate answers to real-world problems involving fractions and mixed numbers* • Uses estimation to solve problems involving fractions and mixed numbers • Predicts the relative size of the answer when adding whole numbers* • Predicts the relative size of the answer when subtracting whole numbers* • Predicts the relative size of the answer when dividing whole numbers	• Rounds decimals to the nearest hundredth • Rounds decimals to nearest thousandth* • Rounds decimals to nearest ten-thousandth* • Uses estimation to solve problems involving decimals • Determines the most accurate answer (fractions only)* • Predicts the relative size of the answer when dividing a smaller whole number by a larger whole number • Describes the effects of multiplying a number by a number between 0 and 1*	• Uses estimation to solve problems involving decimals
New Vocabulary: borrow, compute, expanded notation, exponent, ten million, ten thousandth, tenths, thousandths	*New Vocabulary:* none	*New Vocabulary:* none

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Blank cells indicate data are limited or unavailable for this range or document version.

New Signs and Symbols: lb pound, # number, × multiplication, = is equal to	*New Signs and Symbols:* • multiplication symbol (dot)	*New Signs and Symbols:* none

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Subject: Mathematics
Goal Strand: Number and Numerical Operations
RIT Score Range: Above 240

Skills and Concepts to Enhance 231 - 240	Skills and Concepts to Develop Above 240
Number Sense - Construct Meaning	**Number Sense - Construct Meaning**
Number Sense - Understand Place Value	**Number Sense - Understand Place Value**
• Writes whole numbers in standard and exponential form	
Number Sense - Recognize and Use U.S. Currency	**Number Sense - Recognize and Use U.S. Currency**
Number Sense - Compare and Order Numbers	**Number Sense - Compare and Order Numbers**
• Compares fractions (e.g., comparing numerators and denominators) • Compares and orders decimal and fractional coordinates on a number line*	
Number Sense - Represent Equivalence of Numbers	**Number Sense - Represent Equivalence of Numbers**
Number Sense - Apply Number Theory Concepts	**Number Sense - Apply Number Theory Concepts**
Numerical Operations - Develop Meanings	**Numerical Operations - Develop Meanings**
• Models algorithms using place value concepts (addition and subtraction with whole numbers)* • Models algorithms using place value concepts (multiplication and division with whole numbers)*	
Numerical Operations - Add and Subtract	**Numerical Operations - Add and Subtract**
• Adds fractions with unlike denominators with reducing or converting to a mixed fraction • Adds whole numbers, fractions, and mixed fractions without reducing • Adds mixed fractions where converting from improper fractions is necessary • Subtracts whole numbers, fractions, and mixed fractions with regrouping • Subtracts a decimal from a whole number, horizontally	
Numerical Operations - Multiply and Divide	**Numerical Operations - Multiply and Divide**
• Divides multiple-digit numbers • Uses appropriate algorithms to represent multiplication or division with whole numbers*	• Evaluates expressions using the order of operations, including exponents (whole numbers only)

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
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• Evaluates numerical expressions using the order of operations (whole numbers only) • Evaluates expressions using the order of operations, including exponents (whole numbers only)	
Estimation	**Estimation**
• Rounds decimals to the nearest hundredth • Rounds decimals to nearest thousandth* • Rounds decimals to nearest ten-thousandth* • Uses estimation to solve problems involving decimals • Determines the most accurate answer (fractions only)* • Predicts the relative size of the answer when dividing a smaller whole number by a larger whole number • Describes the effects of multiplying a number by a number between 0 and 1*	• Uses estimation to solve problems involving decimals
New Vocabulary: none	*New Vocabulary:* none
New Signs and Symbols: • multiplication symbol (dot)	*New Signs and Symbols:* none

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
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Subject: Mathematics
Goal Strand: Geometry and Measurement
RIT Score Range: Below 161

Skills and Concepts to Develop Below 161	Skills and Concepts to Introduce 161 - 170
Geometric Properties	**Geometric Properties**
• Identifies figures that are the same size and shape • Predicts the shape after unfolding a figure*	• Identifies and names a triangle • Identifies and names a square • Identifies and names a rectangle* • Identifies and names a circle* • Identifies sides and vertices of polygons • Identifies bases of a cylinder* • Identifies and names a cone • Compares open and closed figures* • Sorts solid figures and objects according to attributes* • Identifies figures that are the same size and shape
Transforming Shapes	**Transforming Shapes**
Coordinate Geometry	**Coordinate Geometry**
Units of Measurement	**Units of Measurement**
• Compares objects (wider, narrower)* • Compares objects (taller, shorter)* • Identifies time of day (e.g., morning, afternoon)*	• Compares objects (shorter, longer) • Estimates and measures length of an object to the nearest inch using a picture of a ruler* • Orders periods of time (days of the week)*
Measuring Geometric Objects	**Measuring Geometric Objects**
	• Measures length with customary measures to the inch mark* • Measures length with metric measures to the centimeter mark • Tells time to the nearest hour* • Tells time to the nearest half hour • Reads a calendar - no computation required
New Vocabulary: size	*New Vocabulary:* centimeter, circle, corner, cylinder, flat, longest, minute, rectangle, shortest, side, tall, time
New Signs and Symbols: : used with time	*New Signs and Symbols:* cm centimeter/centimetre, ft feet, • point

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Subject: Mathematics
Goal Strand: Geometry and Measurement
RIT Score Range: 161 - 170

Skills and Concepts to Enhance Below 161	Skills and Concepts to Develop 161 - 170	Skills and Concepts to Introduce 171 - 180
Geometric Properties	**Geometric Properties**	**Geometric Properties**
• Identifies figures that are the same size and shape • Predicts the shape after unfolding a figure*	• Identifies and names a triangle • Identifies and names a square • Identifies and names a rectangle* • Identifies and names a circle* • Identifies sides and vertices of polygons • Identifies bases of a cylinder* • Identifies and names a cone • Compares open and closed figures* • Sorts solid figures and objects according to attributes* • Identifies figures that are the same size and shape	• Identifies and names a triangle • Identifies and names a square • Identifies and names a rectangle* • Identifies and names a circle* • Identifies and names a cube • Recognizes geometric shapes in real-world objects • Identifies spatial sense concepts (e.g., outside, inside, between, over, under, above, below, behind, in front, middle)* • Identifies figures that are similar
Transforming Shapes	**Transforming Shapes**	**Transforming Shapes**
Coordinate Geometry	**Coordinate Geometry**	**Coordinate Geometry**
Units of Measurement	**Units of Measurement**	**Units of Measurement**
• Compares objects (wider, narrower)* • Compares objects (taller, shorter)* • Identifies time of day (e.g., morning, afternoon)*	• Compares objects (shorter, longer) • Estimates and measures length of an object to the nearest inch using a picture of a ruler* • Orders periods of time (days of the week)*	• Estimates and measures length of an object to the nearest centimeter using a picture of a ruler* • Knows the approximate weight of familiar objects • Orders periods of time (months of the year, seasons)* • Computes simple conversions among units of time (minutes in an hour, half hour, quarter hour)
Measuring Geometric Objects	**Measuring Geometric Objects**	**Measuring Geometric Objects**
	• Measures length with customary measures to the inch mark* • Measures length with metric measures to the centimeter mark • Tells time to the nearest hour* • Tells time to the nearest half hour • Reads a calendar - no computation required	• Measures length with customary measures to the inch mark* • Tells time to the nearest hour* • Tells time to the nearest half hour • Tells time to the nearest 5 minutes • Reads Fahrenheit thermometers to the nearest degree*
New Vocabulary: size	*New Vocabulary:* centimeter, circle, corner, cylinder, flat, longest, minute, rectangle, shortest, side, tall, time	*New Vocabulary:* diamond, geometric figure, gram, line segment, metric, morning, outside, quart, quarter, ray, second, similar
New Signs and Symbols: : used with time	*New Signs and Symbols:* cm centimeter/centimetre, ft feet, • point	*New Signs and Symbols:* a.m., °F degrees Fahrenheit, g gram, = is equal to, ? next in sequence, p.m.

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Subject: Mathematics
Goal Strand: Geometry and Measurement
RIT Score Range: 171 - 180

Skills and Concepts to Enhance 161 - 170	Skills and Concepts to Develop 171 - 180	Skills and Concepts to Introduce 181 - 190
Geometric Properties	**Geometric Properties**	**Geometric Properties**
• Identifies and names a triangle • Identifies and names a square • Identifies and names a rectangle* • Identifies and names a circle* • Identifies sides and vertices of polygons • Identifies bases of a cylinder* • Identifies and names a cone • Compares open and closed figures* • Sorts solid figures and objects according to attributes* • Identifies figures that are the same size and shape	• Identifies and names a triangle • Identifies and names a square • Identifies and names a rectangle* • Identifies and names a circle* • Identifies and names a cube • Recognizes geometric shapes in real-world objects • Identifies spatial sense concepts (e.g., outside, inside, between, over, under, above, below, behind, in front, middle)* • Identifies figures that are similar	• Identifies points on a line* • Identifies congruent line segments* • Identifies and names multiple shapes (e.g., square, rectangle, triangle, circle)* • Classifies polygons by sides and vertices • Identifies and names a cube • Identifies and names a sphere • Identifies congruent figures • Identifies figures that are similar • Identifies plane figures with line symmetry
Transforming Shapes	**Transforming Shapes**	**Transforming Shapes**
		• Identifies transformations of plane figures (rotations/turns) • Identifies transformations of plane figures (translations/slides)*
Coordinate Geometry	**Coordinate Geometry**	**Coordinate Geometry**
		• Determines and names locations in the first quadrant on a labeled grid or coordinate system (e.g., map or graph)*
Units of Measurement	**Units of Measurement**	**Units of Measurement**
• Compares objects (shorter, longer) • Estimates and measures length of an object to the nearest inch using a picture of a ruler* • Orders periods of time (days of the week)*	• Estimates and measures length of an object to the nearest centimeter using a picture of a ruler* • Knows the approximate weight of familiar objects • Orders periods of time (months of the year, seasons)* • Computes simple conversions among units of time (minutes in an hour, half hour, quarter hour)	• Identifies the appropriate instrument used to measure length* • Selects and uses the appropriate type and size of unit in customary system (length) • Selects and uses the appropriate type and size of unit in customary system (height)* • Knows the approximate size of an inch • Knows the approximate length of familiar objects* • Selects and uses the appropriate type and size of unit in customary system (weight)* • Determines more capacity or less capacity • Selects and uses the appropriate type and size of unit in customary system (capacity)* • Identifies the correct time, given the words, and vice versa

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		• Selects and uses the appropriate type and size of unit in customary system (time)* • Computes simple conversions among units of time (days, weeks)*
Measuring Geometric Objects	**Measuring Geometric Objects**	**Measuring Geometric Objects**
• Measures length with customary measures to the inch mark* • Measures length with metric measures to the centimeter mark • Tells time to the nearest hour* • Tells time to the nearest half hour • Reads a calendar - no computation required	• Measures length with customary measures to the inch mark* • Tells time to the nearest hour* • Tells time to the nearest half hour • Tells time to the nearest 5 minutes • Reads Fahrenheit thermometers to the nearest degree*	• Measures length with non-standard units • Measures length with customary measures to the half-inch mark • Determines elapsed clock time • Determines elapsed time under 1 hour or to the hour • Determines elapsed time involving whole hours, whole days, whole years • Tells time to the nearest 5 minutes • Interprets a calendar - some computation required • Reads Fahrenheit thermometers to the nearest degree* • Determines the perimeter of a figure where all sides are labeled • Compares squares (larger, smaller)
New Vocabulary: centimeter, circle, corner, cylinder, flat, longest, minute, rectangle, shortest, side, tall, time	*New Vocabulary:* diamond, geometric figure, gram, line segment, metric, morning, outside, quart, quarter, ray, second, similar	*New Vocabulary:* clock, clockwise, cup, distance, estimation, flip, foot, fourth, gallon, grid, half past, how much time, kilometer, line of symmetry, liter, measurement, millimeter, noon, o'clock, pint, quarter past, quarter to, rectangular solid, rod, rotation, smallest, symmetry, tablespoon, teaspoon, ton, turn, unit, what time, yard
New Signs and Symbols: cm centimeter/centimetre, ft feet, • point	*New Signs and Symbols:* a.m., °F degrees Fahrenheit, g gram, = is equal to, ? next in sequence, p.m.	*New Signs and Symbols:* ( ) ordered pair, : used with time, c cup, gal gallon, in. inch, m meter/metre, pt pint, qt quart, tsp teaspoon

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Subject: Mathematics
Goal Strand: Geometry and Measurement
RIT Score Range: 181 - 190

Skills and Concepts to Enhance 171 - 180	Skills and Concepts to Develop 181 - 190	Skills and Concepts to Introduce 191 - 200
Geometric Properties	**Geometric Properties**	**Geometric Properties**
• Identifies and names a triangle • Identifies and names a square • Identifies and names a rectangle* • Identifies and names a circle* • Identifies and names a cube • Recognizes geometric shapes in real-world objects • Identifies spatial sense concepts (e.g., outside, inside, between, over, under, above, below, behind, in front, middle)* • Identifies figures that are similar	• Identifies points on a line* • Identifies congruent line segments* • Identifies and names multiple shapes (e.g., square, rectangle, triangle, circle)* • Classifies polygons by sides and vertices • Identifies and names a cube • Identifies and names a sphere • Identifies congruent figures • Identifies figures that are similar • Identifies plane figures with line symmetry	• Identifies lines* • Identifies parallel lines • Identifies angles* • Identifies points on a circle* • Identifies diagonals of a polygon • Identifies and names a polygon* • Identifies and names a pentagon* • Identifies the number of faces on rectangular prisms • Identifies and names a cylinder • Identifies and names a sphere • Sorts 2-D shapes and objects according to their attributes • Creates a new shape by combining different shapes, or identifies the different shapes that were used to make the original shape* • Identifies position of shapes (e.g., inside, outside, between)* • Identifies figures that are the same size and shape (analysis)* • Identifies congruent figures • Identifies plane figures with line symmetry • Identifies the number of lines of symmetry in plane figures
Transforming Shapes	**Transforming Shapes**	**Transforming Shapes**
	• Identifies transformations of plane figures (rotations/turns) • Identifies transformations of plane figures (translations/slides)*	• Identifies transformations of plane figures (reflections/flips)
Coordinate Geometry	**Coordinate Geometry**	**Coordinate Geometry**
	• Determines and names locations in the first quadrant on a labeled grid or coordinate system (e.g., map or graph)*	• Determines and names locations in the first quadrant on a labeled grid or coordinate system (e.g., map or graph)*
Units of Measurement	**Units of Measurement**	**Units of Measurement**
• Estimates and measures length of an object to the nearest centimeter using a picture of a ruler*	• Identifies the appropriate instrument used to measure length*	• Selects and uses the appropriate type and size of unit in customary system (length)

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• Knows the approximate weight of familiar objects • Orders periods of time (months of the year, seasons)* • Computes simple conversions among units of time (minutes in an hour, half hour, quarter hour)	• Selects and uses the appropriate type and size of unit in customary system (length) • Selects and uses the appropriate type and size of unit in customary system (height)* • Knows the approximate size of an inch • Knows the approximate length of familiar objects* • Selects and uses the appropriate type and size of unit in customary system (weight)* • Determines more capacity or less capacity • Selects and uses the appropriate type and size of unit in customary system (capacity)* • Identifies the correct time, given the words, and vice versa • Selects and uses the appropriate type and size of unit in customary system (time)* • Computes simple conversions among units of time (days, weeks)*	• Selects and uses the appropriate type and size of unit in customary system (height)* • Knows the approximate size of a foot • Knows the approximate size of a mile* • Selects and uses the appropriate type and size of unit in customary system (weight)* • Knows the approximate size of an ounce* • Selects and uses the appropriate type and size of unit in customary system (capacity)* • Knows the approximate size of a pint* • Converts between cups and pints* • Converts between cups, pints, and quarts* • Identifies the correct time, given the words, and vice versa • Orders years* • Selects and uses the appropriate type and size of unit in customary system (time)* • Computes simple conversions among units of time (minutes, hours) • Computes simple conversions among units of time (hours, days)* • Estimates the area of rectangles using square units
Measuring Geometric Objects	**Measuring Geometric Objects**	**Measuring Geometric Objects**
• Measures length with customary measures to the inch mark* • Tells time to the nearest hour* • Tells time to the nearest half hour • Tells time to the nearest 5 minutes • Reads Fahrenheit thermometers to the nearest degree*	• Measures length with non-standard units • Measures length with customary measures to the half-inch mark • Determines elapsed clock time • Determines elapsed time under 1 hour or to the hour • Determines elapsed time involving whole hours, whole days, whole years • Tells time to the nearest 5 minutes • Interprets a calendar - some computation required • Reads Fahrenheit thermometers to the nearest degree* • Determines the perimeter of a figure where all sides are labeled • Compares squares (larger, smaller)	• Measures length with non-standard units • Uses balance scale to measure weight of an unknown object* • Determines elapsed clock time • Tells time to the nearest quarter hour • Determines elapsed time involving whole hours, whole days, whole years • Tells time to the nearest 1 minute • Reads Celsius thermometers to the nearest degree • Determines the perimeter of a figure where all sides are labeled • Determines the perimeter of a figure where some sides are labeled
New Vocabulary: diamond, geometric figure, gram, line segment, metric, morning, outside, quart, quarter, ray, second, similar	*New Vocabulary:* clock, clockwise, cup, distance, estimation, flip, foot, fourth, gallon, grid, half past, how much time, kilometer, line of symmetry, liter, measurement, millimeter, noon, o'clock, pint, quarter past, quarter to, rectangular solid, rod, rotation, smallest, symmetry, tablespoon, teaspoon, ton, turn, unit, what time, yard	*New Vocabulary:* approximate, decade, diagonal, face, inside, intersect, kite, large, oval, parallel, plane, polygon, rectangular, rhombus, same shape, square inch, straight, twist, vertical line

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New Signs and Symbols: a.m., °F degrees Fahrenheit, g gram, = is equal to, ? next in sequence, p.m.	*New Signs and Symbols:* ( ) ordered pair, : used with time, c cup, gal gallon, in. inch, m meter/metre, pt pint, qt quart, tsp teaspoon	*New Signs and Symbols:* °C degrees Celsius, " inches, kg kilogram, • multiplication symbol (dot)

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Subject: Mathematics
Goal Strand: Geometry and Measurement
RIT Score Range: 191 - 200

Skills and Concepts to Enhance 181 - 190	Skills and Concepts to Develop 191 - 200	Skills and Concepts to Introduce 201 - 210
Geometric Properties	**Geometric Properties**	**Geometric Properties**
• Identifies points on a line* • Identifies congruent line segments* • Identifies and names multiple shapes (e.g., square, rectangle, triangle, circle)* • Classifies polygons by sides and vertices • Identifies and names a cube • Identifies and names a sphere • Identifies congruent figures • Identifies figures that are similar • Identifies plane figures with line symmetry	• Identifies lines* • Identifies parallel lines • Identifies angles* • Identifies points on a circle* • Identifies diagonals of a polygon • Identifies and names a polygon* • Identifies and names a pentagon* • Identifies the number of faces on rectangular prisms • Identifies and names a cylinder • Identifies and names a sphere • Sorts 2-D shapes and objects according to their attributes • Creates a new shape by combining different shapes, or identifies the different shapes that were used to make the original shape* • Identifies position of shapes (e.g., inside, outside, between)* • Identifies figures that are the same size and shape (analysis)* • Identifies congruent figures • Identifies plane figures with line symmetry • Identifies the number of lines of symmetry in plane figures	• Identifies the intersection point of two lines* • Identifies intersecting lines • Identifies parallel lines • Identifies angles* • Identifies right angles* • Identifies and names a parallelogram* • Identifies and names a polygon* • Identifies and names a hexagon* • Identifies and names a octagon* • Classifies polygons by sides and angles • Classifies cubes by their properties (e.g., edges with equal lengths, faces with equal areas and congruent shapes, right angle corners) • Identifies and names a cylinder • Classifies cylinders by their properties (e.g., base shape, lateral surface shape, vertices)* • Classifies plane figures by the number of lines of symmetry*
Transforming Shapes	**Transforming Shapes**	**Transforming Shapes**
• Identifies transformations of plane figures (rotations/turns) • Identifies transformations of plane figures (translations/slides)*	• Identifies transformations of plane figures (reflections/flips)	• Defines transformations*
Coordinate Geometry	**Coordinate Geometry**	**Coordinate Geometry**
• Determines and names locations in the first quadrant on a labeled grid or coordinate system (e.g., map or graph)*	• Determines and names locations in the first quadrant on a labeled grid or coordinate system (e.g., map or graph)*	• Graphs ordered pairs in the first quadrant • Determines and names locations in the first quadrant on a labeled grid or coordinate system (e.g., map or graph)* • Determines the distance between horizontal and vertical lines in the first quadrant of a rectangular

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		coordinate system*
Units of Measurement	**Units of Measurement**	**Units of Measurement**
• Identifies the appropriate instrument used to measure length* • Selects and uses the appropriate type and size of unit in customary system (length) • Selects and uses the appropriate type and size of unit in customary system (height)* • Knows the approximate size of an inch • Knows the approximate length of familiar objects* • Selects and uses the appropriate type and size of unit in customary system (weight)* • Determines more capacity or less capacity • Selects and uses the appropriate type and size of unit in customary system (capacity)* • Identifies the correct time, given the words, and vice versa • Selects and uses the appropriate type and size of unit in customary system (time)* • Computes simple conversions among units of time (days, weeks)*	• Selects and uses the appropriate type and size of unit in customary system (length) • Selects and uses the appropriate type and size of unit in customary system (height)* • Knows the approximate size of a foot • Knows the approximate size of a mile* • Selects and uses the appropriate type and size of unit in customary system (weight)* • Knows the approximate size of an ounce* • Selects and uses the appropriate type and size of unit in customary system (capacity)* • Knows the approximate size of a pint* • Converts between cups and pints* • Converts between cups, pints, and quarts* • Identifies the correct time, given the words, and vice versa • Orders years* • Selects and uses the appropriate type and size of unit in customary system (time)* • Computes simple conversions among units of time (minutes, hours) • Computes simple conversions among units of time (hours, days)* • Estimates the area of rectangles using square units	• Selects and uses the appropriate type and size of unit in metric system (length) • Selects and uses the appropriate type and size of unit in metric system (height)* • Knows the approximate size of a yard • Knows the approximate size of a centimeter • Converts between inches and feet • Selects and uses balances for measuring weight or mass* • Knows the approximate size of a pound • Knows the approximate size of a gram • Converts between milligrams and grams* • Converts between cups and pints* • Converts between cups, pints, and quarts* • Computes simple conversions among units of time (hours, days)* • Computes more difficult conversions among units of time • Solves problems involving measurement of time • Knows common referents (boiling or freezing point, room temperature)* • Estimates the measure of acute, right, and obtuse angles using 45 and 90 degrees as referents • Estimates the area of rectangles using square units • Estimates and finds volume of a figure using cubic units
Measuring Geometric Objects	**Measuring Geometric Objects**	**Measuring Geometric Objects**
• Measures length with non-standard units • Measures length with customary measures to the half-inch mark • Determines elapsed clock time • Determines elapsed time under 1 hour or to the hour • Determines elapsed time involving whole hours, whole days, whole years • Tells time to the nearest 5 minutes • Interprets a calendar - some computation required • Reads Fahrenheit thermometers to the nearest degree* • Determines the perimeter of a figure where all sides are labeled • Compares squares (larger, smaller)	• Measures length with non-standard units • Uses balance scale to measure weight of an unknown object* • Determines elapsed clock time • Tells time to the nearest quarter hour • Determines elapsed time involving whole hours, whole days, whole years • Tells time to the nearest 1 minute • Reads Celsius thermometers to the nearest degree • Determines the perimeter of a figure where all sides are labeled • Determines the perimeter of a figure where some sides are labeled	• Measures length to the nearest centimeter* • Determines the perimeter of a figure where some sides are labeled • Solves simple problems comparing area and perimeter (customary units)* • Identifies situations where it is appropriate to calculate area
New Vocabulary: clock, clockwise, cup, distance,	*New Vocabulary:* approximate, decade, diagonal, face,	*New Vocabulary:* circumference, coordinate point, cubic

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estimation, flip, foot, fourth, gallon, grid, half past, how much time, kilometer, line of symmetry, liter, measurement, millimeter, noon, o'clock, pint, quarter past, quarter to, rectangular solid, rod, rotation, smallest, symmetry, tablespoon, teaspoon, ton, turn, unit, what time, yard	inside, intersect, kite, large, oval, parallel, plane, polygon, rectangular, rhombus, same shape, square inch, straight, twist, vertical line	centimeter, cubic unit, decameter, decimeter, edge, kilogram, larger, milligram, milliliter, mirror image, octagon, ordered pair, parallel line, quadrilateral, regular polygon, trapezoid, vertex
New Signs and Symbols: ( ) ordered pair, : used with time, c cup, gal gallon, in. inch, m meter/metre, pt pint, qt quart, tsp teaspoon	*New Signs and Symbols:* °C degrees Celsius, " inches, kg kilogram, • multiplication symbol (dot)	*New Signs and Symbols:* ∠ angle, ° degrees, ' feet, ↔ line symbol, m measure of angle, mm millimeter/millimetre, right angle marker, □ variable

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Subject: Mathematics
Goal Strand: Geometry and Measurement
RIT Score Range: 201 - 210

Skills and Concepts to Enhance 191 - 200	Skills and Concepts to Develop 201 - 210	Skills and Concepts to Introduce 211 - 220
Geometric Properties	**Geometric Properties**	**Geometric Properties**
• Identifies lines* • Identifies parallel lines • Identifies angles* • Identifies points on a circle* • Identifies diagonals of a polygon • Identifies and names a polygon* • Identifies and names a pentagon* • Identifies the number of faces on rectangular prisms • Identifies and names a cylinder • Identifies and names a sphere • Sorts 2-D shapes and objects according to their attributes • Creates a new shape by combining different shapes, or identifies the different shapes that were used to make the original shape* • Identifies position of shapes (e.g., inside, outside, between)* • Identifies figures that are the same size and shape (analysis)* • Identifies congruent figures • Identifies plane figures with line symmetry • Identifies the number of lines of symmetry in plane figures	• Identifies the intersection point of two lines* • Identifies intersecting lines • Identifies parallel lines • Identifies angles* • Identifies right angles* • Identifies and names a parallelogram* • Identifies and names a polygon* • Identifies and names a hexagon* • Identifies and names a octagon* • Classifies polygons by sides and angles • Classifies cubes by their properties (e.g., edges with equal lengths, faces with equal areas and congruent shapes, right angle corners) • Identifies and names a cylinder • Classifies cylinders by their properties (e.g., base shape, lateral surface shape, vertices)* • Classifies plane figures by the number of lines of symmetry*	• Identifies rays* • Identifies perpendicular lines* • Describes relationships among points, lines, and planes, and identifies models in the environment* • Identifies right angles within adjacent angles* • Identifies properties of angles • Identifies acute angles • Identifies obtuse angles • Identifies the diameter of a circle* • Identifies the circumference of circle* • Identifies the number of degrees in a circle* • Identifies and names a quadrilateral* • Classifies polygons by type of angle* • Classifies polygons by number of sides* • Identifies corners (vertices) of cubes* • Identifies and names a rectangular prism* • Predicts and verifies the effects of combining or subdividing basic shapes • Compares simple plane figures to solid figures (e.g., circle/sphere, square/cube, rectangle/rectangular solid)* • Identifies similar and congruent triangles* • Identifies congruent polygons and their corresponding sides and angles* • Defines "similarity"* • Recognizes similar figures in the real world* • Classifies plane figures by the number of lines of symmetry*
Transforming Shapes	**Transforming Shapes**	**Transforming Shapes**
• Identifies transformations of plane figures (reflections/flips)	• Defines transformations*	• Identifies geometric transformations (rotations)* • Identifies geometric transformations (translations)* • Identifies geometric transformations (reflections)*
Coordinate Geometry	**Coordinate Geometry**	**Coordinate Geometry**
• Determines and names locations in the first quadrant	• Graphs ordered pairs in the first quadrant	• Determines the distance between horizontal and

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on a labeled grid or coordinate system (e.g., map or graph)* **Units of Measurement** • Selects and uses the appropriate type and size of unit in customary system (length) • Selects and uses the appropriate type and size of unit in customary system (height)* • Knows the approximate size of a foot • Knows the approximate size of a mile* • Selects and uses the appropriate type and size of unit in customary system (weight)* • Knows the approximate size of an ounce* • Selects and uses the appropriate type and size of unit in customary system (capacity)* • Knows the approximate size of a pint* • Converts between cups and pints* • Converts between cups, pints, and quarts* • Identifies the correct time, given the words, and vice versa • Orders years* • Selects and uses the appropriate type and size of unit in customary system (time)* • Computes simple conversions among units of time (minutes, hours) • Computes simple conversions among units of time (hours, days)* • Estimates the area of rectangles using square units **Measuring Geometric Objects** • Measures length with non-standard units • Uses balance scale to measure weight of an unknown object* • Determines elapsed clock time • Tells time to the nearest quarter hour • Determines elapsed time involving whole hours, whole days, whole years • Tells time to the nearest 1 minute • Reads Celsius thermometers to the nearest degree	• Determines and names locations in the first quadrant on a labeled grid or coordinate system (e.g., map or graph)* • Determines the distance between horizontal and vertical lines in the first quadrant of a rectangular coordinate system* **Units of Measurement** • Selects and uses the appropriate type and size of unit in metric system (length) • Selects and uses the appropriate type and size of unit in metric system (height)* • Knows the approximate size of a yard • Knows the approximate size of a centimeter • Converts between inches and feet • Selects and uses balances for measuring weight or mass* • Knows the approximate size of a pound • Knows the approximate size of a gram • Converts between milligrams and grams* • Converts between cups and pints* • Converts between cups, pints, and quarts* • Computes simple conversions among units of time (hours, days)* • Computes more difficult conversions among units of time • Solves problems involving measurement of time • Knows common referents (boiling or freezing point, room temperature)* • Estimates the measure of acute, right, and obtuse angles using 45 and 90 degrees as referents • Estimates the area of rectangles using square units • Estimates and finds volume of a figure using cubic units **Measuring Geometric Objects** • Measures length to the nearest centimeter* • Determines the perimeter of a figure where some sides are labeled • Solves simple problems comparing area and perimeter (customary units)* • Identifies situations where it is appropriate to calculate area	vertical lines in the first quadrant of a rectangular coordinate system* **Units of Measurement** • Selects and uses the appropriate type and size of unit in metric system (length) • Selects and uses the appropriate type and size of unit in metric system (height)* • Knows the approximate size of a millimeter* • Knows the approximate size of a kilometer* • Converts between inches and feet • Converts between inches, feet, and yards • Converts between feet, yards, and miles* • Computes basic addition with units of length • Selects and uses the appropriate type and size of unit in metric system (mass)* • Knows the approximate size of an ounce* • Knows the approximate size of a gallon* • Converts between cups, pints, quarts, and gallons • Computes basic operations with units of time • Relates years, decades, centuries, and millenniums • Selects and uses protractors for measuring angles* • Estimates the measure of acute, right, and obtuse angles using 45 and 90 degrees as referents • Estimates and finds volume of a figure using cubic units **Measuring Geometric Objects** • Measures length to the nearest half inch* • Measures length to the nearest quarter of an inch • Measures length to the nearest eighth of an inch • Reads Celsius thermometers to 0.1 degrees* • Determines the perimeter of a figure using non-standard units* • Determines the process for calculating perimeter • Solves simple problems comparing area and perimeter (customary units)*

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• Determines the perimeter of a figure where all sides are labeled • Determines the perimeter of a figure where some sides are labeled		
New Vocabulary: approximate, decade, diagonal, face, inside, intersect, kite, large, oval, parallel, plane, polygon, rectangular, rhombus, same shape, square inch, straight, twist, vertical line	*New Vocabulary:* circumference, coordinate point, cubic centimeter, cubic unit, decameter, decimeter, edge, kilogram, larger, milligram, milliliter, mirror image, octagon, ordered pair, parallel line, quadrilateral, regular polygon, trapezoid, vertex	*New Vocabulary:* acute angle, century, congruent angle, dilation, enlargement, geometric solid, micrometer, obtuse angle, perpendicular line, protractor, straight angle, tessellation, transformation, translation, union
New Signs and Symbols: °C degrees Celsius, " inches, kg kilogram, • multiplication symbol (dot)	*New Signs and Symbols:* ∠ angle, ° degrees, ' feet, ↔ line symbol, m measure of angle, mm millimeter/millimetre, right angle marker, □ variable	*New Signs and Symbols:* + addition, angle marker (arc), ÷ division, fl oz fluid ounce, hr hour, min minute, × multiplication, oz ounce, sec second, segment overbar, – subtraction, yd yard

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Subject: Mathematics
Goal Strand: Geometry and Measurement
RIT Score Range: 211 - 220

Skills and Concepts to Enhance 201 - 210	Skills and Concepts to Develop 211 - 220	Skills and Concepts to Introduce 221 - 230
Geometric Properties	**Geometric Properties**	**Geometric Properties**
• Identifies the intersection point of two lines* • Identifies intersecting lines • Identifies parallel lines • Identifies angles* • Identifies right angles* • Identifies and names a parallelogram* • Identifies and names a polygon* • Identifies and names a hexagon* • Identifies and names a octagon* • Classifies polygons by sides and angles • Classifies cubes by their properties (e.g., edges with equal lengths, faces with equal areas and congruent shapes, right angle corners) • Identifies and names a cylinder • Classifies cylinders by their properties (e.g., base shape, lateral surface shape, vertices)* • Classifies plane figures by the number of lines of symmetry*	• Identifies rays* • Identifies perpendicular lines* • Describes relationships among points, lines, and planes, and identifies models in the environment* • Identifies right angles within adjacent angles* • Identifies properties of angles • Identifies acute angles • Identifies obtuse angles • Identifies the diameter of a circle* • Identifies the circumference of circle* • Identifies the number of degrees in a circle* • Identifies and names a quadrilateral* • Classifies polygons by type of angle* • Classifies polygons by number of sides* • Identifies corners (vertices) of cubes* • Identifies and names a rectangular prism* • Predicts and verifies the effects of combining or subdividing basic shapes • Compares simple plane figures to solid figures (e.g., circle/sphere, square/cube, rectangle/rectangular solid)* • Identifies similar and congruent triangles* • Identifies congruent polygons and their corresponding sides and angles* • Defines "similarity"* • Recognizes similar figures in the real world* • Classifies plane figures by the number of lines of symmetry*	• Identifies rays* • Determines which lines are perpendicular (analysis)* • Identifies properties of parallel and perpendicular lines • Identifies right angles within adjacent angles* • Identifies acute angles • Recognizes the interior angle relationships of triangles • Classifies equilateral triangles* • Identifies and names a trapezoid* • Identifies the radius of a circle • Identifies the diameter of a circle* • Identifies the circumference of circle* • Identifies the number of degrees in a circle* • Identifies and names a quadrilateral* • Classifies polygons by type of angle* • Identifies the number of edges on rectangular prisms* • Predicts changes necessary to create symmetry in basic plane shapes*
Transforming Shapes	**Transforming Shapes**	**Transforming Shapes**
• Defines transformations*	• Identifies geometric transformations (rotations)* • Identifies geometric transformations (translations)* • Identifies geometric transformations (reflections)*	• Identifies geometric transformations (rotations)* • Identifies geometric transformations (translations)* • Identifies geometric transformations (reflections)*
Coordinate Geometry	**Coordinate Geometry**	**Coordinate Geometry**
• Graphs ordered pairs in the first quadrant	• Determines the distance between horizontal and	• Determines coordinates of geometric figures in the first

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• Determines and names locations in the first quadrant on a labeled grid or coordinate system (e.g., map or graph)* • Determines the distance between horizontal and vertical lines in the first quadrant of a rectangular coordinate system*	vertical lines in the first quadrant of a rectangular coordinate system*	quadrant • Determines the distance between points, following grid lines, in the first quadrant on a coordinate graph (as in city blocks)*
Units of Measurement	**Units of Measurement**	**Units of Measurement**
• Selects and uses the appropriate type and size of unit in metric system (length) • Selects and uses the appropriate type and size of unit in metric system (height)* • Knows the approximate size of a yard • Knows the approximate size of a centimeter • Converts between inches and feet • Selects and uses balances for measuring weight or mass* • Knows the approximate size of a pound • Knows the approximate size of a gram • Converts between milligrams and grams* • Converts between cups and pints* • Converts between cups, pints, and quarts* • Computes simple conversions among units of time (hours, days)* • Computes more difficult conversions among units of time • Solves problems involving measurement of time • Knows common referents (boiling or freezing point, room temperature)* • Estimates the measure of acute, right, and obtuse angles using 45 and 90 degrees as referents • Estimates the area of rectangles using square units • Estimates and finds volume of a figure using cubic units	• Selects and uses the appropriate type and size of unit in metric system (length) • Selects and uses the appropriate type and size of unit in metric system (height)* • Knows the approximate size of a millimeter* • Knows the approximate size of a kilometer* • Converts between inches and feet • Converts between inches, feet, and yards • Converts between feet, yards, and miles* • Computes basic addition with units of length • Selects and uses the appropriate type and size of unit in metric system (mass)* • Knows the approximate size of an ounce* • Knows the approximate size of a gallon* • Converts between cups, pints, quarts, and gallons • Computes basic operations with units of time • Relates years, decades, centuries, and millenniums • Selects and uses protractors for measuring angles* • Estimates the measure of acute, right, and obtuse angles using 45 and 90 degrees as referents • Estimates and finds volume of a figure using cubic units	• Uses the appropriate unit of measure for length* • Knows the approximate size of a meter • Converts between inches, feet, and yards • Converts between feet, yards, and miles* • Computes basic addition with units of length • Computes basic subtraction and multiplication with units of length • Converts between millimeters, centimeters, meters, and kilometers • Converts between ounces and pounds • Converts between ounces, pounds, and tons* • Computes basic operations with units of weight/mass* • Converts between cups, pints, quarts, and gallons • Converts within the metric system • Computes basic operations with units of time • Relates years, decades, centuries, and millenniums • Computes 2-step conversions between units of time • Uses the appropriate unit of measure for area*
Measuring Geometric Objects	**Measuring Geometric Objects**	**Measuring Geometric Objects**
• Measures length to the nearest centimeter* • Determines the perimeter of a figure where some sides are labeled • Solves simple problems comparing area and perimeter (customary units)* • Identifies situations where it is appropriate to calculate area	• Measures length to the nearest half inch* • Measures length to the nearest quarter of an inch • Measures length to the nearest eighth of an inch • Reads Celsius thermometers to 0.1 degrees* • Determines the perimeter of a figure using non-standard units* • Determines the process for calculating perimeter • Solves simple problems comparing area and perimeter (customary units)*	• Measures length to the nearest millimeter • Calculates the area of a rectangle, given labeled sides (customary units) • Determines the length or width of a rectangle, given the area (metric units)* • Uses models to develop the relationship between the total number of square units contained in a rectangle and the length and width of the figure* • Calculates area and perimeter of a rectangle

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		(customary units)
New Vocabulary: circumference, coordinate point, cubic centimeter, cubic unit, decameter, decimeter, edge, kilogram, larger, milligram, milliliter, mirror image, octagon, ordered pair, parallel line, quadrilateral, regular polygon, trapezoid, vertex	*New Vocabulary:* acute angle, century, congruent angle, dilation, enlargement, geometric solid, micrometer, obtuse angle, perpendicular line, protractor, straight angle, tessellation, transformation, translation, union	*New Vocabulary:* arc, center, central angle, cubic feet, equilateral, interior angle, isosceles triangle, obtuse triangle, right triangle, scalene triangle
New Signs and Symbols: ∠ angle, ° degrees, ' feet, ↔ line symbol, m measure of angle, mm millimeter/millimetre, right angle marker, □ variable	*New Signs and Symbols:* + addition, angle marker (arc), ÷ division, fl oz fluid ounce, hr hour, min minute, × multiplication, oz ounce, sec second, segment overbar, – subtraction, yd yard	*New Signs and Symbols:* dm decimeter/decimetre, km kilometer/kilometre, lb pound, mL milliliter/millilitre, π pi

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Subject: Mathematics
Goal Strand: Geometry and Measurement
RIT Score Range: 221 - 230

Skills and Concepts to Enhance 211 - 220	Skills and Concepts to Develop 221 - 230	Skills and Concepts to Introduce 231 - 240
Geometric Properties	**Geometric Properties**	**Geometric Properties**
• Identifies rays* • Identifies perpendicular lines* • Describes relationships among points, lines, and planes, and identifies models in the environment* • Identifies right angles within adjacent angles* • Identifies properties of angles • Identifies acute angles • Identifies obtuse angles • Identifies the diameter of a circle* • Identifies the circumference of circle* • Identifies the number of degrees in a circle* • Identifies and names a quadrilateral* • Classifies polygons by type of angle* • Classifies polygons by number of sides* • Identifies corners (vertices) of cubes* • Identifies and names a rectangular prism* • Predicts and verifies the effects of combining or subdividing basic shapes • Compares simple plane figures to solid figures (e.g., circle/sphere, square/cube, rectangle/rectangular solid)* • Identifies similar and congruent triangles* • Identifies congruent polygons and their corresponding sides and angles* • Defines "similarity"* • Recognizes similar figures in the real world* • Classifies plane figures by the number of lines of symmetry*	• Identifies rays* • Determines which lines are perpendicular (analysis)* • Identifies properties of parallel and perpendicular lines • Identifies right angles within adjacent angles* • Identifies acute angles • Recognizes the interior angle relationships of triangles • Classifies equilateral triangles* • Identifies and names a trapezoid* • Identifies the radius of a circle • Identifies the diameter of a circle* • Identifies the circumference of circle* • Identifies the number of degrees in a circle* • Identifies and names a quadrilateral* • Classifies polygons by type of angle* • Identifies the number of edges on rectangular prisms* • Predicts changes necessary to create symmetry in basic plane shapes*	• Determines which lines are perpendicular (analysis)* • Recognizes the interior angle relationships of triangles • Classifies isosceles triangles • Identifies properties of circles • Classifies square pyramids by their properties (e.g., base shape, lateral surface shape, vertices)* • Classifies rectangular pyramids by their properties (e.g., base shape, lateral surface shape, vertices)*
Transforming Shapes	**Transforming Shapes**	**Transforming Shapes**
• Identifies geometric transformations (rotations)* • Identifies geometric transformations (translations)* • Identifies geometric transformations (reflections)*	• Identifies geometric transformations (rotations)* • Identifies geometric transformations (translations)* • Identifies geometric transformations (reflections)*	• Identifies geometric transformations (dilations)
Coordinate Geometry	**Coordinate Geometry**	**Coordinate Geometry**
• Determines the distance between horizontal and	• Determines coordinates of geometric figures in the first	

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vertical lines in the first quadrant of a rectangular coordinate system*	quadrant • Determines the distance between points, following grid lines, in the first quadrant on a coordinate graph (as in city blocks)*	
Units of Measurement	**Units of Measurement**	**Units of Measurement**
• Selects and uses the appropriate type and size of unit in metric system (length) • Selects and uses the appropriate type and size of unit in metric system (height)* • Knows the approximate size of a millimeter* • Knows the approximate size of a kilometer* • Converts between inches and feet • Converts between inches, feet, and yards • Converts between feet, yards, and miles* • Computes basic addition with units of length • Selects and uses the appropriate type and size of unit in metric system (mass)* • Knows the approximate size of an ounce* • Knows the approximate size of a gallon* • Converts between cups, pints, quarts, and gallons • Computes basic operations with units of time • Relates years, decades, centuries, and millenniums • Selects and uses protractors for measuring angles* • Estimates the measure of acute, right, and obtuse angles using 45 and 90 degrees as referents • Estimates and finds volume of a figure using cubic units	• Uses the appropriate unit of measure for length* • Knows the approximate size of a meter • Converts between inches, feet, and yards • Converts between feet, yards, and miles* • Computes basic addition with units of length • Computes basic subtraction and multiplication with units of length • Converts between millimeters, centimeters, meters, and kilometers • Converts between ounces and pounds • Converts between ounces, pounds, and tons* • Computes basic operations with units of weight/mass* • Converts between cups, pints, quarts, and gallons • Converts within the metric system • Computes basic operations with units of time • Relates years, decades, centuries, and millenniums • Computes 2-step conversions between units of time • Uses the appropriate unit of measure for area*	• Converts between feet, yards, and miles* • Computes basic subtraction and multiplication with units of length • Converts between millimeters, centimeters, meters, and kilometers • Converts between grams and kilograms* • Computes basic operations with units of capacity • Converts within the metric system
Measuring Geometric Objects	**Measuring Geometric Objects**	**Measuring Geometric Objects**
• Measures length to the nearest half inch* • Measures length to the nearest quarter of an inch • Measures length to the nearest eighth of an inch • Reads Celsius thermometers to 0.1 degrees* • Determines the perimeter of a figure using non-standard units* • Determines the process for calculating perimeter • Solves simple problems comparing area and perimeter (customary units)*	• Measures length to the nearest millimeter • Calculates the area of a rectangle, given labeled sides (customary units) • Determines the length or width of a rectangle, given the area (metric units)* • Uses models to develop the relationship between the total number of square units contained in a rectangle and the length and width of the figure* • Calculates area and perimeter of a rectangle (customary units)	• Measures length to the nearest millimeter • Calculates the area of a rectangle, given labeled sides (customary units) • Determines the length or width of a rectangle, given the area (metric units)* • Determines area, length, or width, given the formula with variables* • Describes the change in area of a rectangle when dimensions of an object are altered*
New Vocabulary: acute angle, century, congruent angle, dilation, enlargement, geometric solid, micrometer, obtuse angle, perpendicular line, protractor, straight angle, tessellation, transformation, translation, union	*New Vocabulary:* arc, center, central angle, cubic feet, equilateral, interior angle, isosceles triangle, obtuse triangle, right triangle, scalene triangle	*New Vocabulary:* acute triangle, chord, minus, secant, square pyramid, tangent, tripled
New Signs and Symbols: + addition, angle marker (arc), ÷	*New Signs and Symbols:* dm decimeter/decimetre, km	*New Signs and Symbols:* A area, congruent segment

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division, fl oz fluid ounce, hr hour, min minute, × multiplication, oz ounce, sec second, segment overbar, – subtraction, yd yard	kilometer/kilometre, lb pound, mL milliliter/millilitre, π pi	symbol, l length, w width

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Subject: Mathematics
Goal Strand: Geometry and Measurement
RIT Score Range: 231 - 240

Skills and Concepts to Enhance 221 - 230	Skills and Concepts to Develop 231 - 240	Skills and Concepts to Introduce 241 - 250
Geometric Properties	**Geometric Properties**	**Geometric Properties**
• Identifies rays* • Determines which lines are perpendicular (analysis)* • Identifies properties of parallel and perpendicular lines • Identifies right angles within adjacent angles* • Identifies acute angles • Recognizes the interior angle relationships of triangles • Classifies equilateral triangles* • Identifies and names a trapezoid* • Identifies the radius of a circle • Identifies the diameter of a circle* • Identifies the circumference of circle* • Identifies the number of degrees in a circle* • Identifies and names a quadrilateral* • Classifies polygons by type of angle* • Identifies the number of edges on rectangular prisms* • Predicts changes necessary to create symmetry in basic plane shapes*	• Determines which lines are perpendicular (analysis)* • Recognizes the interior angle relationships of triangles • Classifies isosceles triangles • Identifies properties of circles • Classifies square pyramids by their properties (e.g., base shape, lateral surface shape, vertices)* • Classifies rectangular pyramids by their properties (e.g., base shape, lateral surface shape, vertices)*	• Identifies and names a rhombus* • Identifies symmetry of a sphere*
Transforming Shapes	**Transforming Shapes**	**Transforming Shapes**
• Identifies geometric transformations (rotations)* • Identifies geometric transformations (translations)* • Identifies geometric transformations (reflections)*	• Identifies geometric transformations (dilations)	
Coordinate Geometry	**Coordinate Geometry**	**Coordinate Geometry**
• Determines coordinates of geometric figures in the first quadrant • Determines the distance between points, following grid lines, in the first quadrant on a coordinate graph (as in city blocks)*		
Units of Measurement	**Units of Measurement**	**Units of Measurement**
• Uses the appropriate unit of measure for length* • Knows the approximate size of a meter • Converts between inches, feet, and yards • Converts between feet, yards, and miles* • Computes basic addition with units of length • Computes basic subtraction and multiplication with	• Converts between feet, yards, and miles* • Computes basic subtraction and multiplication with units of length • Converts between millimeters, centimeters, meters, and kilometers • Converts between grams and kilograms*	• Uses dimensional analysis for unit conversions (time)

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units of length • Converts between millimeters, centimeters, meters, and kilometers • Converts between ounces and pounds • Converts between ounces, pounds, and tons* • Computes basic operations with units of weight/mass* • Converts between cups, pints, quarts, and gallons • Converts within the metric system • Computes basic operations with units of time • Relates years, decades, centuries, and millenniums • Computes 2-step conversions between units of time • Uses the appropriate unit of measure for area*	• Computes basic operations with units of capacity • Converts within the metric system	
Measuring Geometric Objects	**Measuring Geometric Objects**	**Measuring Geometric Objects**
• Measures length to the nearest millimeter • Calculates the area of a rectangle, given labeled sides (customary units) • Determines the length or width of a rectangle, given the area (metric units)* • Uses models to develop the relationship between the total number of square units contained in a rectangle and the length and width of the figure* • Calculates area and perimeter of a rectangle (customary units)	• Measures length to the nearest millimeter • Calculates the area of a rectangle, given labeled sides (customary units) • Determines the length or width of a rectangle, given the area (metric units)* • Determines area, length, or width, given the formula with variables* • Describes the change in area of a rectangle when dimensions of an object are altered*	• Describes the change in area of a rectangle when dimensions of an object are altered*
New Vocabulary: arc, center, central angle, cubic feet, equilateral, interior angle, isosceles triangle, obtuse triangle, right triangle, scalene triangle	*New Vocabulary:* acute triangle, chord, minus, secant, square pyramid, tangent, tripled	*New Vocabulary:* infinite
New Signs and Symbols: dm decimeter/decimetre, km kilometer/kilometre, lb pound, mL milliliter/millilitre, π pi	*New Signs and Symbols:* `A` area, congruent segment symbol, `l` length, `w` width	*New Signs and Symbols:* $ dollar sign, mph miles per hour

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Subject: Mathematics
Goal Strand: Geometry and Measurement
RIT Score Range: 241 - 250

Skills and Concepts to Enhance 231 - 240	Skills and Concepts to Develop 241 - 250	Skills and Concepts to Introduce Above 250
Geometric Properties	**Geometric Properties**	**Geometric Properties**
• Determines which lines are perpendicular (analysis)* • Recognizes the interior angle relationships of triangles • Classifies isosceles triangles • Identifies properties of circles • Classifies square pyramids by their properties (e.g., base shape, lateral surface shape, vertices)* • Classifies rectangular pyramids by their properties (e.g., base shape, lateral surface shape, vertices)*	• Identifies and names a rhombus* • Identifies symmetry of a sphere*	• Identifies and names a rhombus* • Uses sums of interior/exterior angles to identify polygons
Transforming Shapes	**Transforming Shapes**	**Transforming Shapes**
• Identifies geometric transformations (dilations)		
Coordinate Geometry	**Coordinate Geometry**	**Coordinate Geometry**
Units of Measurement	**Units of Measurement**	**Units of Measurement**
• Converts between feet, yards, and miles* • Computes basic subtraction and multiplication with units of length • Converts between millimeters, centimeters, meters, and kilometers • Converts between grams and kilograms* • Computes basic operations with units of capacity • Converts within the metric system	• Uses dimensional analysis for unit conversions (time)	• Uses dimensional analysis for unit conversions (time)
Measuring Geometric Objects	**Measuring Geometric Objects**	**Measuring Geometric Objects**
• Measures length to the nearest millimeter • Calculates the area of a rectangle, given labeled sides (customary units) • Determines the length or width of a rectangle, given the area (metric units)* • Determines area, length, or width, given the formula with variables* • Describes the change in area of a rectangle when dimensions of an object are altered*	• Describes the change in area of a rectangle when dimensions of an object are altered*	• Determines the area of a figure when plotting ordered pairs without a grid* • Determines the length of the side of a square, given the area*
New Vocabulary: acute triangle, chord, minus, secant, square pyramid, tangent, tripled	*New Vocabulary:* infinite	*New Vocabulary:* exterior angle
New Signs and Symbols: A area, congruent segment	*New Signs and Symbols:* $ dollar sign, mph miles per hour	*New Signs and Symbols:* – negative number

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symbol, `l` length, `w` width		

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Subject: Mathematics
Goal Strand: Geometry and Measurement
RIT Score Range: Above 250

Skills and Concepts to Enhance 241 - 250	Skills and Concepts to Develop Above 250
Geometric Properties	**Geometric Properties**
• Identifies and names a rhombus* • Identifies symmetry of a sphere*	• Identifies and names a rhombus* • Uses sums of interior/exterior angles to identify polygons
Transforming Shapes	**Transforming Shapes**
Coordinate Geometry	**Coordinate Geometry**
Units of Measurement	**Units of Measurement**
• Uses dimensional analysis for unit conversions (time)	• Uses dimensional analysis for unit conversions (time)
Measuring Geometric Objects	**Measuring Geometric Objects**
• Describes the change in area of a rectangle when dimensions of an object are altered*	• Determines the area of a figure when plotting ordered pairs without a grid* • Determines the length of the side of a square, given the area*
New Vocabulary: infinite	*New Vocabulary:* exterior angle
New Signs and Symbols: $ dollar sign, mph miles per hour	*New Signs and Symbols:* − negative number

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Subject: Mathematics
Goal Strand: Patterns and Algebra
RIT Score Range: Below 161

Skills and Concepts to Develop Below 161	Skills and Concepts to Introduce 161 - 170
Patterns	**Patterns**
• Applies the rule to determine which number does not belong - growing pattern: arithmetic*	• Extends repeating patterns - geometric shapes • Completes a growing arithmetic pattern by naming missing members • Applies the rule to determine which number does not belong - growing pattern: arithmetic*
Functions and Relationships	**Functions and Relationships**
Modeling and Procedures	**Modeling and Procedures**
	• Solves basic-facts open sentences - addition and subtraction
New Vocabulary: none	*New Vocabulary:* addend
New Signs and Symbols: none	*New Signs and Symbols:* + addition, = is equal to, – subtraction, □ variable

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Subject: Mathematics
Goal Strand: Patterns and Algebra
RIT Score Range: 161 - 170

Skills and Concepts to Enhance Below 161	Skills and Concepts to Develop 161 - 170	Skills and Concepts to Introduce 171 - 180
Patterns	**Patterns**	**Patterns**
• Applies the rule to determine which number does not belong - growing pattern: arithmetic*	• Extends repeating patterns - geometric shapes • Completes a growing arithmetic pattern by naming missing members • Applies the rule to determine which number does not belong - growing pattern: arithmetic*	• Extends repeating patterns - geometric shapes • Extends a growing arithmetic pattern, defined by numbers • Completes a growing arithmetic pattern by naming missing members
Functions and Relationships	**Functions and Relationships**	**Functions and Relationships**
Modeling and Procedures	**Modeling and Procedures**	**Modeling and Procedures**
	• Solves basic-facts open sentences - addition and subtraction	• Determines the operation needed from a simple problem* • Writes a number sentence for a simple problem solving situation* • Solves basic-facts open sentences - addition and subtraction • Solves linear equations with basic facts - 1-step addition using a letter for the variable*
New Vocabulary: none	*New Vocabulary:* addend	*New Vocabulary:* multiply, rate, subtract, whole number
New Signs and Symbols: none	*New Signs and Symbols:* + addition, = is equal to, – subtraction, □ variable	*New Signs and Symbols:* $ dollar sign

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Subject: Mathematics
Goal Strand: Patterns and Algebra
RIT Score Range: 171 - 180

Skills and Concepts to Enhance 161 - 170	Skills and Concepts to Develop 171 - 180	Skills and Concepts to Introduce 181 - 190
Patterns	**Patterns**	**Patterns**
• Extends repeating patterns - geometric shapes • Completes a growing arithmetic pattern by naming missing members • Applies the rule to determine which number does not belong - growing pattern: arithmetic*	• Extends repeating patterns - geometric shapes • Extends a growing arithmetic pattern, defined by numbers • Completes a growing arithmetic pattern by naming missing members	• Extends a growing arithmetic pattern, defined by numbers • Completes a growing arithmetic pattern using models by identifying the missing members* • Completes arithmetic growth patterns in number tables by identifying the missing elements • Extends a decreasing arithmetic patterns* • Applies the rule to determine which set of letters is not like the other sets - other patterns*
Functions and Relationships	**Functions and Relationships**	**Functions and Relationships**
Modeling and Procedures	**Modeling and Procedures**	**Modeling and Procedures**
• Solves basic-facts open sentences - addition and subtraction	• Determines the operation needed from a simple problem* • Writes a number sentence for a simple problem solving situation* • Solves basic-facts open sentences - addition and subtraction • Solves linear equations with basic facts - 1-step addition using a letter for the variable*	• Determines the operation needed from a simple problem* • Writes a number sentence for a simple problem solving situation* • Solves basic facts addition and subtraction open sentences using diagrams and models (e.g., using balances)* • Solves linear equations with basic facts - 1-step addition using a letter for the variable* • Solves 1-step open sentences with missing addends (numbers 100 and under)
New Vocabulary: addend	*New Vocabulary:* multiply, rate, subtract, whole number	*New Vocabulary:* none
New Signs and Symbols: + addition, = is equal to, – subtraction, □ variable	*New Signs and Symbols:* $ dollar sign	*New Signs and Symbols:* none

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Subject: Mathematics
Goal Strand: Patterns and Algebra
RIT Score Range: 181 - 190

Skills and Concepts to Enhance 171 - 180	Skills and Concepts to Develop 181 - 190	Skills and Concepts to Introduce 191 - 200
Patterns	**Patterns**	**Patterns**
• Extends repeating patterns - geometric shapes • Extends a growing arithmetic pattern, defined by numbers • Completes a growing arithmetic pattern by naming missing members	• Extends a growing arithmetic pattern, defined by numbers • Completes a growing arithmetic pattern using models by identifying the missing members* • Completes arithmetic growth patterns in number tables by identifying the missing elements • Extends a decreasing arithmetic patterns* • Applies the rule to determine which set of letters is not like the other sets - other patterns*	• Extends a growing arithmetic pattern, defined by objects or diagrams* • Completes a growing arithmetic pattern using models by identifying the missing members* • Extends a decreasing arithmetic patterns* • Extends patterns formed by letters*
Functions and Relationships	**Functions and Relationships**	**Functions and Relationships**
Modeling and Procedures	**Modeling and Procedures**	**Modeling and Procedures**
• Determines the operation needed from a simple problem* • Writes a number sentence for a simple problem solving situation* • Solves basic-facts open sentences - addition and subtraction • Solves linear equations with basic facts - 1-step addition using a letter for the variable*	• Determines the operation needed from a simple problem* • Writes a number sentence for a simple problem solving situation* • Solves basic facts addition and subtraction open sentences using diagrams and models (e.g., using balances)* • Solves linear equations with basic facts - 1-step addition using a letter for the variable* • Solves 1-step open sentences with missing addends (numbers 100 and under)	• Determines the operation needed from a simple problem* • Determines the operation needed to solve a real-world problem • Translates from a diagram to an expression or equation* • Translates a 1-step problem to a symbolic expression or equation • Solves basic facts addition and subtraction open sentences using diagrams and models (e.g., using balances)* • Solves complex open linear sentences using diagrams and models (e.g., using balances)* • Solves 1-step open sentences with missing addends (numbers 100 and under) • Solves 1-step open sentences with missing addends (numbers over 100) • Solves simple open sentences with missing factors (numbers 100 and under)* • Solves 2-step open sentences with missing addends*
New Vocabulary: multiply, rate, subtract, whole number	*New Vocabulary:* none	*New Vocabulary:* operation, rename
New Signs and Symbols: $ dollar sign	*New Signs and Symbols:* none	*New Signs and Symbols:* ¢ cent sign, ÷ division, > greater than, < less than, × multiplication

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Subject: Mathematics
Goal Strand: Patterns and Algebra
RIT Score Range: 191 - 200

Skills and Concepts to Enhance 181 - 190	Skills and Concepts to Develop 191 - 200	Skills and Concepts to Introduce 201 - 210
Patterns	**Patterns**	**Patterns**
• Extends a growing arithmetic pattern, defined by numbers • Completes a growing arithmetic pattern using models by identifying the missing members* • Completes arithmetic growth patterns in number tables by identifying the missing elements • Extends a decreasing arithmetic patterns* • Applies the rule to determine which set of letters is not like the other sets - other patterns*	• Extends a growing arithmetic pattern, defined by objects or diagrams* • Completes a growing arithmetic pattern using models by identifying the missing members* • Extends a decreasing arithmetic patterns* • Extends patterns formed by letters*	• Extends a growing arithmetic pattern, defined by objects or diagrams* • Extends a pattern formed by two arithmetic growing patterns - odd and even terms (such as 1,5,4,8,7,...) • Extends a growing pattern of numbers - explicit quadratic rule - recursive rule is to add x more each time (such as 1,2,4,7,...)* • Extends a pattern formed by rotating a geometric figure
Functions and Relationships	**Functions and Relationships**	**Functions and Relationships**
Modeling and Procedures	**Modeling and Procedures**	**Modeling and Procedures**
• Determines the operation needed from a simple problem* • Writes a number sentence for a simple problem solving situation* • Solves basic facts addition and subtraction open sentences using diagrams and models (e.g., using balances)* • Solves linear equations with basic facts - 1-step addition using a letter for the variable* • Solves 1-step open sentences with missing addends (numbers 100 and under)	• Determines the operation needed from a simple problem* • Determines the operation needed to solve a real-world problem • Translates from a diagram to an expression or equation* • Translates a 1-step problem to a symbolic expression or equation • Solves basic facts addition and subtraction open sentences using diagrams and models (e.g., using balances)* • Solves complex open linear sentences using diagrams and models (e.g., using balances)* • Solves 1-step open sentences with missing addends (numbers 100 and under) • Solves 1-step open sentences with missing addends (numbers over 100) • Solves simple open sentences with missing factors (numbers 100 and under)* • Solves 2-step open sentences with missing addends*	• Writes a number sentence for a simple problem solving situation (analysis) • Determines the operation needed to solve a real-world problem • Translates a number sentence to a real-world situation* • Translates a 1-step problem to a symbolic expression or equation • Translates a 2-step problem to a symbolic expression or equation • Uses simple linear equations to represent problem situations • Describes a realistic situation using information given in a linear equation* • Solves complex open linear sentences using diagrams and models (e.g., using balances)* • Solves 1-step open sentences with missing addends (numbers over 100) • Solves simple open sentences with missing factors (numbers 100 and under)* • Solves 2-step open sentences with missing addends* • Solves open sentences with basic-facts calculations on both sides of the sentence
New Vocabulary: none	*New Vocabulary:* operation, rename	*New Vocabulary:* mathematical statement, minimum

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New Signs and Symbols: none	*New Signs and Symbols:* ¢ cent sign, ÷ division, > greater than, < less than, × multiplication	*New Signs and Symbols:* ( ) order of operations, + positive number, = is equal to

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
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Subject: Mathematics
Goal Strand: Patterns and Algebra
RIT Score Range: 201 - 210

Skills and Concepts to Enhance 191 - 200	Skills and Concepts to Develop 201 - 210	Skills and Concepts to Introduce 211 - 220
Patterns	**Patterns**	**Patterns**
• Extends a growing arithmetic pattern, defined by objects or diagrams* • Completes a growing arithmetic pattern using models by identifying the missing members* • Extends a decreasing arithmetic patterns* • Extends patterns formed by letters*	• Extends a growing arithmetic pattern, defined by objects or diagrams* • Extends a pattern formed by two arithmetic growing patterns - odd and even terms (such as 1,5,4,8,7,...) • Extends a growing pattern of numbers - explicit quadratic rule - recursive rule is to add x more each time (such as 1,2,4,7,...)* • Extends a pattern formed by rotating a geometric figure	• Extends a repeating pattern of geometric shapes in a grid* • Extends a growing geometric pattern - using numbers* • Extends a pattern formed by two arithmetic growing patterns - odd and even terms (such as 1,5,4,8,7,...) • Extends, or completes, growing patterns defined by equations or number facts • Extends a growing pattern of numbers - explicit quadratic rule - recursive rule is to add x more each time (such as 1,2,4,7,...)* • Identifies rules and applies them to new patterns
Functions and Relationships	**Functions and Relationships**	**Functions and Relationships**
		• Determines the rule and completes a simple function machine output*
Modeling and Procedures	**Modeling and Procedures**	**Modeling and Procedures**
• Determines the operation needed from a simple problem* • Determines the operation needed to solve a real-world problem • Translates from a diagram to an expression or equation* • Translates a 1-step problem to a symbolic expression or equation • Solves basic facts addition and subtraction open sentences using diagrams and models (e.g., using balances)* • Solves complex open linear sentences using diagrams and models (e.g., using balances)* • Solves 1-step open sentences with missing addends (numbers 100 and under) • Solves 1-step open sentences with missing addends (numbers over 100) • Solves simple open sentences with missing factors (numbers 100 and under)* • Solves 2-step open sentences with missing addends*	• Writes a number sentence for a simple problem solving situation (analysis) • Determines the operation needed to solve a real-world problem • Translates a number sentence to a real-world situation* • Translates a 1-step problem to a symbolic expression or equation • Translates a 2-step problem to a symbolic expression or equation • Uses simple linear equations to represent problem situations • Describes a realistic situation using information given in a linear equation* • Solves complex open linear sentences using diagrams and models (e.g., using balances)* • Solves 1-step open sentences with missing addends (numbers over 100) • Solves simple open sentences with missing factors (numbers 100 and under)* • Solves 2-step open sentences with missing addends*	• Translates a 2-step problem to a symbolic expression or equation • Uses simple linear equations to represent problem situations • Solves simple open sentences with missing factors (numbers over 100) • Solves open sentences using the distributive property • Solves open sentences with calculations on both sides of the sentence • Solves 2-step open sentences with missing factors

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
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	• Solves open sentences with basic-facts calculations on both sides of the sentence	
New Vocabulary: operation, rename	*New Vocabulary:* mathematical statement, minimum	*New Vocabulary:* none
New Signs and Symbols: ¢ cent sign, ÷ division, > greater than, < less than, × multiplication	*New Signs and Symbols:* ( ) order of operations, + positive number, = is equal to	*New Signs and Symbols:* ? next in sequence

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Subject: Mathematics
Goal Strand: Patterns and Algebra
RIT Score Range: 211 - 220

Skills and Concepts to Enhance 201 - 210	Skills and Concepts to Develop 211 - 220	Skills and Concepts to Introduce 221 - 230
Patterns	**Patterns**	**Patterns**
• Extends a growing arithmetic pattern, defined by objects or diagrams* • Extends a pattern formed by two arithmetic growing patterns - odd and even terms (such as 1,5,4,8,7,...) • Extends a growing pattern of numbers - explicit quadratic rule - recursive rule is to add x more each time (such as 1,2,4,7,...)* • Extends a pattern formed by rotating a geometric figure	• Extends a repeating pattern of geometric shapes in a grid* • Extends a growing geometric pattern - using numbers* • Extends a pattern formed by two arithmetic growing patterns - odd and even terms (such as 1,5,4,8,7,...) • Extends, or completes, growing patterns defined by equations or number facts • Extends a growing pattern of numbers - explicit quadratic rule - recursive rule is to add x more each time (such as 1,2,4,7,...)* • Identifies rules and applies them to new patterns	• Extends a growing pattern of triangular numbers, defined by objects or diagrams
Functions and Relationships	**Functions and Relationships**	**Functions and Relationships**
	• Determines the rule and completes a simple function machine output*	
Modeling and Procedures	**Modeling and Procedures**	**Modeling and Procedures**
• Writes a number sentence for a simple problem solving situation (analysis) • Determines the operation needed to solve a real-world problem • Translates a number sentence to a real-world situation* • Translates a 1-step problem to a symbolic expression or equation • Translates a 2-step problem to a symbolic expression or equation • Uses simple linear equations to represent problem situations • Describes a realistic situation using information given in a linear equation* • Solves complex open linear sentences using diagrams and models (e.g., using balances)* • Solves 1-step open sentences with missing addends (numbers over 100) • Solves simple open sentences with missing factors (numbers 100 and under)* • Solves 2-step open sentences with missing addends*	• Translates a 2-step problem to a symbolic expression or equation • Uses simple linear equations to represent problem situations • Solves simple open sentences with missing factors (numbers over 100) • Solves open sentences using the distributive property • Solves open sentences with calculations on both sides of the sentence • Solves 2-step open sentences with missing factors	• Describes and uses a variable with whole numbers, multiplication, and division in a contextual situation* • Solves open sentences with calculations on both sides of the sentence • Solves 2-step open sentences with missing factors

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.

Blank cells indicate data are limited or unavailable for this range or document version.

• Solves open sentences with basic-facts calculations on both sides of the sentence		
New Vocabulary: mathematical statement, minimum	*New Vocabulary:* none	*New Vocabulary:* none
New Signs and Symbols: ( ) order of operations, + positive number, = is equal to	*New Signs and Symbols:* ? next in sequence	*New Signs and Symbols:* none

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Subject: Mathematics
Goal Strand: Patterns and Algebra
RIT Score Range: 221 - 230

Skills and Concepts to Enhance 211 - 220	Skills and Concepts to Develop 221 - 230	Skills and Concepts to Introduce Above 230
Patterns	**Patterns**	**Patterns**
• Extends a repeating pattern of geometric shapes in a grid* • Extends a growing geometric pattern - using numbers* • Extends a pattern formed by two arithmetic growing patterns - odd and even terms (such as 1,5,4,8,7,...) • Extends, or completes, growing patterns defined by equations or number facts • Extends a growing pattern of numbers - explicit quadratic rule - recursive rule is to add x more each time (such as 1,2,4,7,...)* • Identifies rules and applies them to new patterns	• Extends a growing pattern of triangular numbers, defined by objects or diagrams	• Represents growing arithmetic patterns using algebraic expressions or equations* • Uses an algebraic expression to represent a triangular number pattern*
Functions and Relationships	**Functions and Relationships**	**Functions and Relationships**
• Determines the rule and completes a simple function machine output*		
Modeling and Procedures	**Modeling and Procedures**	**Modeling and Procedures**
• Translates a 2-step problem to a symbolic expression or equation • Uses simple linear equations to represent problem situations • Solves simple open sentences with missing factors (numbers over 100) • Solves open sentences using the distributive property • Solves open sentences with calculations on both sides of the sentence • Solves 2-step open sentences with missing factors	• Describes and uses a variable with whole numbers, multiplication, and division in a contextual situation* • Solves open sentences with calculations on both sides of the sentence • Solves 2-step open sentences with missing factors	
New Vocabulary: none	*New Vocabulary:* none	*New Vocabulary:* none
New Signs and Symbols: ? next in sequence	*New Signs and Symbols:* none	*New Signs and Symbols:* none

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Subject: Mathematics
Goal Strand: Patterns and Algebra
RIT Score Range: Above 230

Skills and Concepts to Enhance 221 - 230	Skills and Concepts to Develop Above 230
Patterns	**Patterns**
• Extends a growing pattern of triangular numbers, defined by objects or diagrams	• Represents growing arithmetic patterns using algebraic expressions or equations* • Uses an algebraic expression to represent a triangular number pattern*
Functions and Relationships	**Functions and Relationships**
Modeling and Procedures	**Modeling and Procedures**
• Describes and uses a variable with whole numbers, multiplication, and division in a contextual situation* • Solves open sentences with calculations on both sides of the sentence • Solves 2-step open sentences with missing factors	
New Vocabulary: none	*New Vocabulary:* none
New Signs and Symbols: none	*New Signs and Symbols:* none

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Subject: Mathematics
Goal Strand: Data Analysis, Probability, Discrete Mathematics
RIT Score Range: Below 171

Skills and Concepts to Develop Below 171	Skills and Concepts to Introduce 171 - 180
Data Analysis	**Data Analysis**
• Compares data from simple graphs (e.g., largest, smallest, most often, least often)	• Interprets simple graphs or tables • Interprets data using tally charts • Reads and interprets data from a pictograph* • Displays data appropriately - bar graph - scale is 1 to 1* • Compares data from simple graphs (e.g., largest, smallest, most often, least often)
Probability	**Probability**
	• Investigates probability of "more likely" or "less likely" using a table*
Discrete Mathematics	**Discrete Mathematics**
New Vocabulary: dollar, fewest, longest, shortest	*New Vocabulary:* none
New Signs and Symbols: $ dollar sign, = is equal to	*New Signs and Symbols:* | tally mark

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Subject: Mathematics
Goal Strand: Data Analysis, Probability, Discrete Mathematics
RIT Score Range: 171 - 180

Skills and Concepts to Enhance Below 171	Skills and Concepts to Develop 171 - 180	Skills and Concepts to Introduce 181 - 190
Data Analysis	**Data Analysis**	**Data Analysis**
• Compares data from simple graphs (e.g., largest, smallest, most often, least often)	• Interprets simple graphs or tables • Interprets data using tally charts • Reads and interprets data from a pictograph* • Displays data appropriately - bar graph - scale is 1 to 1* • Compares data from simple graphs (e.g., largest, smallest, most often, least often)	• Interprets simple graphs or tables • Reads and interprets data from a bar graph
Probability	**Probability**	**Probability**
	• Investigates probability of "more likely" or "less likely" using a table*	• Investigates probability of "more likely" or "less likely" using a spinner • Investigates probability of "more likely" or "less likely" with objects hidden in containers*
Discrete Mathematics	**Discrete Mathematics**	**Discrete Mathematics**
New Vocabulary: dollar, fewest, longest, shortest	*New Vocabulary:* none	*New Vocabulary:* average, consecutive, lowest, most likely, most often, spinner
New Signs and Symbols: $ dollar sign, = is equal to	*New Signs and Symbols:* | tally mark	*New Signs and Symbols:* none

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Subject: Mathematics
Goal Strand: Data Analysis, Probability, Discrete Mathematics
RIT Score Range: 181 - 190

Skills and Concepts to Enhance 171 - 180	Skills and Concepts to Develop 181 - 190	Skills and Concepts to Introduce 191 - 200
Data Analysis	**Data Analysis**	**Data Analysis**
• Interprets simple graphs or tables • Interprets data using tally charts • Reads and interprets data from a pictograph* • Displays data appropriately - bar graph - scale is 1 to 1* • Compares data from simple graphs (e.g., largest, smallest, most often, least often)	• Interprets simple graphs or tables • Reads and interprets data from a bar graph	• Reads and interprets data from a bar graph • Reads and interprets dual bar graphs* • Reads and interprets simple line graphs • Reads and interprets data given in percent form on a circle graph* • Draws conclusions from data - tally charts or frequency tables*
Probability	**Probability**	**Probability**
• Investigates probability of "more likely" or "less likely" using a table*	• Investigates probability of "more likely" or "less likely" using a spinner • Investigates probability of "more likely" or "less likely" with objects hidden in containers*	• Investigates probability of "more likely" or "less likely" using a spinner • Investigates probability of "more likely" or "less likely" with a dart board*
Discrete Mathematics	**Discrete Mathematics**	**Discrete Mathematics**
New Vocabulary: none	*New Vocabulary:* average, consecutive, lowest, most likely, most often, spinner	*New Vocabulary:* line graph
New Signs and Symbols: | tally mark	*New Signs and Symbols:* none	*New Signs and Symbols:* a.m., °F degrees Fahrenheit, p.m., % percent, : used with time

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
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Subject: Mathematics
Goal Strand: Data Analysis, Probability, Discrete Mathematics
RIT Score Range: 191 - 200

Skills and Concepts to Enhance 181 - 190	Skills and Concepts to Develop 191 - 200	Skills and Concepts to Introduce 201 - 210
Data Analysis	**Data Analysis**	**Data Analysis**
• Interprets simple graphs or tables • Reads and interprets data from a bar graph	• Reads and interprets data from a bar graph • Reads and interprets dual bar graphs* • Reads and interprets simple line graphs • Reads and interprets data given in percent form on a circle graph* • Draws conclusions from data - tally charts or frequency tables*	• Reads and interprets tables* • Understands how the omission or duplication of data affects the interpretation of results from a pictograph* • Organizes data to create simple bar graphs • Displays data appropriately - simple circle graph - no calculations necessary* • Reads and interprets data given in percent form on a circle graph* • Interprets data given in circle graphs to solve simple problems (with percents) • Draws conclusions from data - bar graphs • Predicts from pictographs and bar graphs* • Predicts from simple charts and tables
Probability	**Probability**	**Probability**
• Investigates probability of "more likely" or "less likely" using a spinner • Investigates probability of "more likely" or "less likely" with objects hidden in containers*	• Investigates probability of "more likely" or "less likely" using a spinner • Investigates probability of "more likely" or "less likely" with a dart board*	• Recognizes events that are certain, likely, unlikely, possible, or impossible* • Uses the concept of chance to determine the likelihood of an event* • Determines the probability for a simple experiment using one or more coins • Determines the probability for a simple experiment using objects - must determine size of sample space
Discrete Mathematics	**Discrete Mathematics**	**Discrete Mathematics**
		• Follows, devises, and describes practical sets of directions (e.g., to add two 2-digit numbers)*
New Vocabulary: average, consecutive, lowest, most likely, most often, spinner	*New Vocabulary:* line graph	*New Vocabulary:* bar graph, below, chance, less likely, maximum, probability, random
New Signs and Symbols: none	*New Signs and Symbols:* a.m., °F degrees Fahrenheit, p.m., % percent, : used with time	*New Signs and Symbols:* E east, lb pound, min minute, mph miles per hour, NE northeast, NW northwest, SE southeast, SW southwest

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Subject: Mathematics
Goal Strand: Data Analysis, Probability, Discrete Mathematics
RIT Score Range: 201 - 210

Skills and Concepts to Enhance 191 - 200	Skills and Concepts to Develop 201 - 210	Skills and Concepts to Introduce 211 - 220
Data Analysis	**Data Analysis**	**Data Analysis**
• Reads and interprets data from a bar graph • Reads and interprets dual bar graphs* • Reads and interprets simple line graphs • Reads and interprets data given in percent form on a circle graph* • Draws conclusions from data - tally charts or frequency tables*	• Reads and interprets tables* • Understands how the omission or duplication of data affects the interpretation of results from a pictograph* • Organizes data to create simple bar graphs • Displays data appropriately - simple circle graph - no calculations necessary* • Reads and interprets data given in percent form on a circle graph* • Interprets data given in circle graphs to solve simple problems (with percents) • Draws conclusions from data - bar graphs • Predicts from pictographs and bar graphs* • Predicts from simple charts and tables	• Interprets data in line graphs (e.g., change over time) • Reads and interprets circle graphs* • Interprets data given in circle graphs to solve simple problems (with percents) • Reads and interprets data in line plots* • Determines the average (mean) of a simple set of data • Draws conclusions from data - charts* • Predicts from pictographs and bar graphs* • Predicts from plotted data*
Probability	**Probability**	**Probability**
• Investigates probability of "more likely" or "less likely" using a spinner • Investigates probability of "more likely" or "less likely" with a dart board*	• Recognizes events that are certain, likely, unlikely, possible, or impossible* • Uses the concept of chance to determine the likelihood of an event* • Determines the probability for a simple experiment using one or more coins • Determines the probability for a simple experiment using objects - must determine size of sample space	• Determines the probability for a simple experiment using one die • Determines probability from a real-world situation - number of possible outcomes given • Determines the probabilities for a simple experiment using a frequency table - must determine size of sample space • Determines probability when drawing objects from containers - must determine size of sample space • Determines the possible outcomes for a simple probability experiment using spinners • Predicts the sample space, based on the outcome of an experiment - tally sheet* • Uses the results of probability experiments or events to predict future events*
Discrete Mathematics	**Discrete Mathematics**	**Discrete Mathematics**
	• Follows, devises, and describes practical sets of directions (e.g., to add two 2-digit numbers)*	• Determines the number of possible combinations of given items
New Vocabulary: line graph	*New Vocabulary:* bar graph, below, chance, less likely, maximum, probability, random	*New Vocabulary:* combinations, likelihood, line of best fit, line plot, mean, number cube, outcome, prove, tails
New Signs and Symbols: a.m., °F degrees Fahrenheit, p.m.,	*New Signs and Symbols:* E east, lb pound, min minute,	*New Signs and Symbols:* { } set notation, ¢ cent sign, d

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% percent, : used with time	mph miles per hour, NE northeast, NW northwest, SE southeast, SW southwest	distance, t time

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Subject: Mathematics
Goal Strand: Data Analysis, Probability, Discrete Mathematics
RIT Score Range: 211 - 220

Skills and Concepts to Enhance 201 - 210	Skills and Concepts to Develop 211 - 220	Skills and Concepts to Introduce 221 - 230
Data Analysis	**Data Analysis**	**Data Analysis**
• Reads and interprets tables* • Understands how the omission or duplication of data affects the interpretation of results from a pictograph* • Organizes data to create simple bar graphs • Displays data appropriately - simple circle graph - no calculations necessary* • Reads and interprets data given in percent form on a circle graph* • Interprets data given in circle graphs to solve simple problems (with percents) • Draws conclusions from data - bar graphs • Predicts from pictographs and bar graphs* • Predicts from simple charts and tables	• Interprets data in line graphs (e.g., change over time) • Reads and interprets circle graphs* • Interprets data given in circle graphs to solve simple problems (with percents) • Reads and interprets data in line plots* • Determines the average (mean) of a simple set of data • Draws conclusions from data - charts* • Predicts from pictographs and bar graphs* • Predicts from plotted data*	• Interprets data given in tables to solve problems • Interprets data given in circle graphs to solve complex problems (with percents) • Determines the average (mean) of a simple set of data • Determines the mean of a complex set of data (e.g., fractions, integers, many data points) • Estimates the mean from a set of data* • Determines the middle value (median) from a simple set of data* • Determines the mode of a set of data • Draws conclusions from data - charts* • Predicts from line graphs* • Predicts from plotted data*
Probability	**Probability**	**Probability**
• Recognizes events that are certain, likely, unlikely, possible, or impossible* • Uses the concept of chance to determine the likelihood of an event* • Determines the probability for a simple experiment using one or more coins • Determines the probability for a simple experiment using objects - must determine size of sample space	• Determines the probability for a simple experiment using one die • Determines probability from a real-world situation - number of possible outcomes given • Determines the probabilities for a simple experiment using a frequency table - must determine size of sample space • Determines probability when drawing objects from containers - must determine size of sample space • Determines the possible outcomes for a simple probability experiment using spinners • Predicts the sample space, based on the outcome of an experiment - tally sheet* • Uses the results of probability experiments or events to predict future events*	• Determines the possible outcomes for a simple probability experiment using spinners • Determines the possible outcomes for a simple probability experiment using dart boards* • Determines the outcome of simple multiple events*
Discrete Mathematics	**Discrete Mathematics**	**Discrete Mathematics**
• Follows, devises, and describes practical sets of directions (e.g., to add two 2-digit numbers)*	• Determines the number of possible combinations of given items	• Determines the number of possible combinations of given items
New Vocabulary: bar graph, below, chance, less likely, maximum, probability, random	*New Vocabulary:* combinations, likelihood, line of best fit, line plot, mean, number cube, outcome, prove, tails	*New Vocabulary:* frequency table, median, mode
New Signs and Symbols: E east, lb pound, min minute,	*New Signs and Symbols:* { } set notation, ¢ cent sign, d	*New Signs and Symbols:* cm centimeter/centimetre, h hour

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Blank cells indicate data are limited or unavailable for this range or document version.

mph miles per hour, NE northeast, NW northwest, SE southeast, SW southwest	distance, t time	(SI metric), in. inch, − negative number, oz ounce, s second (SI metric)

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Subject: Mathematics
Goal Strand: Data Analysis, Probability, Discrete Mathematics
RIT Score Range: 221 - 230

Skills and Concepts to Enhance 211 - 220	Skills and Concepts to Develop 221 - 230	Skills and Concepts to Introduce 231 - 240
Data Analysis	**Data Analysis**	**Data Analysis**
• Interprets data in line graphs (e.g., change over time) • Reads and interprets circle graphs* • Interprets data given in circle graphs to solve simple problems (with percents) • Reads and interprets data in line plots* • Determines the average (mean) of a simple set of data • Draws conclusions from data - charts* • Predicts from pictographs and bar graphs* • Predicts from plotted data*	• Interprets data given in tables to solve problems • Interprets data given in circle graphs to solve complex problems (with percents) • Determines the average (mean) of a simple set of data • Determines the mean of a complex set of data (e.g., fractions, integers, many data points) • Estimates the mean from a set of data* • Determines the middle value (median) from a simple set of data* • Determines the mode of a set of data • Draws conclusions from data - charts* • Predicts from line graphs* • Predicts from plotted data*	• Organizes data using tables* • Interprets data given in tables to solve problems • Determines appropriate intervals and/or scale for a bar graph* • Interprets data given in horizontal and vertical bar graphs to solve problems • Interprets data given in line graphs to solve problems* • Interprets data given in circle graphs to solve complex problems (with percents) • Determines the mean of a complex set of data (e.g., fractions, integers, many data points) • Estimates the mean from a set of data* • Predicts from charts and tables
Probability	**Probability**	**Probability**
• Determines the probability for a simple experiment using one die • Determines probability from a real-world situation - number of possible outcomes given • Determines the probabilities for a simple experiment using a frequency table - must determine size of sample space • Determines probability when drawing objects from containers - must determine size of sample space • Determines the possible outcomes for a simple probability experiment using spinners • Predicts the sample space, based on the outcome of an experiment - tally sheet* • Uses the results of probability experiments or events to predict future events*	• Determines the possible outcomes for a simple probability experiment using spinners • Determines the possible outcomes for a simple probability experiment using dart boards* • Determines the outcome of simple multiple events*	
Discrete Mathematics	**Discrete Mathematics**	**Discrete Mathematics**
• Determines the number of possible combinations of given items	• Determines the number of possible combinations of given items	• Constructs simple, valid arguments using if ...then statements based on Venn diagrams*
New Vocabulary: combinations, likelihood, line of best fit, line plot, mean, number cube, outcome, prove, tails	*New Vocabulary:* frequency table, median, mode	*New Vocabulary:* average salary, meters per minute, successive
New Signs and Symbols: { } set notation, ¢ cent sign, d	*New Signs and Symbols:* cm centimeter/centimetre, h hour	*New Signs and Symbols:* $ dollar sign, °C degrees Celsius,

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
Blank cells indicate data are limited or unavailable for this range or document version.

distance, t time	(SI metric), in. inch, – negative number, oz ounce, s second (SI metric)	m meter/metre, mL milliliter/millilitre, ? next in sequence

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
Blank cells indicate data are limited or unavailable for this range or document version.

Subject: Mathematics
Goal Strand: Data Analysis, Probability, Discrete Mathematics
RIT Score Range: 231 - 240

Skills and Concepts to Enhance 221 - 230	Skills and Concepts to Develop 231 - 240	Skills and Concepts to Introduce 241 - 250
Data Analysis	**Data Analysis**	**Data Analysis**
• Interprets data given in tables to solve problems • Interprets data given in circle graphs to solve complex problems (with percents) • Determines the average (mean) of a simple set of data • Determines the mean of a complex set of data (e.g., fractions, integers, many data points) • Estimates the mean from a set of data* • Determines the middle value (median) from a simple set of data* • Determines the mode of a set of data • Draws conclusions from data - charts* • Predicts from line graphs* • Predicts from plotted data*	• Organizes data using tables* • Interprets data given in tables to solve problems • Determines appropriate intervals and/or scale for a bar graph* • Interprets data given in horizontal and vertical bar graphs to solve problems • Interprets data given in line graphs to solve problems* • Interprets data given in circle graphs to solve complex problems (with percents) • Determines the mean of a complex set of data (e.g., fractions, integers, many data points) • Estimates the mean from a set of data* • Predicts from charts and tables	• Reads and interprets data in tables
Probability	**Probability**	**Probability**
• Determines the possible outcomes for a simple probability experiment using spinners • Determines the possible outcomes for a simple probability experiment using dart boards* • Determines the outcome of simple multiple events*		
Discrete Mathematics	**Discrete Mathematics**	**Discrete Mathematics**
• Determines the number of possible combinations of given items	• Constructs simple, valid arguments using if ...then statements based on Venn diagrams*	
New Vocabulary: frequency table, median, mode	*New Vocabulary:* average salary, meters per minute, successive	*New Vocabulary:* mileage table
New Signs and Symbols: cm centimeter/centimetre, h hour (SI metric), in. inch, – negative number, oz ounce, s second (SI metric)	*New Signs and Symbols:* $ dollar sign, °C degrees Celsius, m meter/metre, mL milliliter/millilitre, ? next in sequence	*New Signs and Symbols:* ° degrees, ft feet, NNE north northeast, N north, S south, W west

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
Blank cells indicate data are limited or unavailable for this range or document version.

Subject: Mathematics
Goal Strand: Data Analysis, Probability, Discrete Mathematics
RIT Score Range: 241 - 250

Skills and Concepts to Enhance 231 - 240	Skills and Concepts to Develop 241 - 250	Skills and Concepts to Introduce Above 250
Data Analysis	**Data Analysis**	**Data Analysis**
• Organizes data using tables* • Interprets data given in tables to solve problems • Determines appropriate intervals and/or scale for a bar graph* • Interprets data given in horizontal and vertical bar graphs to solve problems • Interprets data given in line graphs to solve problems* • Interprets data given in circle graphs to solve complex problems (with percents) • Determines the mean of a complex set of data (e.g., fractions, integers, many data points) • Estimates the mean from a set of data* • Predicts from charts and tables	• Reads and interprets data in tables	• Displays data appropriately - circle graph - calculations necessary*
Probability	**Probability**	**Probability**
Discrete Mathematics	**Discrete Mathematics**	**Discrete Mathematics**
• Constructs simple, valid arguments using if ...then statements based on Venn diagrams*		
New Vocabulary: average salary, meters per minute, successive	*New Vocabulary:* mileage table	*New Vocabulary:* none
New Signs and Symbols: $ dollar sign, °C degrees Celsius, m meter/metre, mL milliliter/millilitre, ? next in sequence	*New Signs and Symbols:* ° degrees, ft feet, NNE north northeast, N north, S south, W west	*New Signs and Symbols:* none

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
Blank cells indicate data are limited or unavailable for this range or document version.

Subject: Mathematics
Goal Strand: Data Analysis, Probability, Discrete Mathematics
RIT Score Range: Above 250

Skills and Concepts to Enhance 241 - 250	Skills and Concepts to Develop Above 250
Data Analysis	**Data Analysis**
• Reads and interprets data in tables	• Displays data appropriately - circle graph - calculations necessary*
Probability	**Probability**
Discrete Mathematics	**Discrete Mathematics**
New Vocabulary: mileage table	*New Vocabulary:* none
New Signs and Symbols: ° degrees, ft feet, NNE north northeast, N north, S south, W west	*New Signs and Symbols:* none

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
Blank cells indicate data are limited or unavailable for this range or document version.

Subject: Mathematics
Goal Strand: Mathematical Processes
RIT Score Range: Below 171

Skills and Concepts to Develop Below 171	Skills and Concepts to Introduce 171 - 180
Problem Solving	**Problem Solving**
• Solves real-world whole number addition problems with sums to 20 (result unknown) • Solves simple problems based on data from tables*	• Solves real-world whole number addition problems with sums to 20 (result unknown) • Solves real-world whole number addition problems with sums to 20 (start unknown)* • Solves real-world whole number addition problems with sums to 20 (change unknown)* • Solves real-world whole number addition problems with sums to 100 (result unknown)* • Solves real-world whole number addition problems with sums to 1000 • Solves real-world whole number problems involving subtraction with numbers under 20 • Solves simple problems based on data from pictographs • Solves simple problems based on data from bar graphs
Communication, Connections, Reasoning	**Communication, Connections, Reasoning**
• Analyzes another student's explanation to understand simple problems* • Uses a structured model to solve problems using a variety of strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses manipulatives to model and justify solutions* • Follows a model of problem solving that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness*	• Analyzes another student's explanation to understand simple problems* • Uses a structured model to solve problems using a variety of strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses appropriate technology to solve problems* • Uses words, pictures, numbers, and technology to explain the solution to problems* • Uses manipulatives to model and justify solutions* • Follows a model of problem solving that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness*
New Vocabulary: table	*New Vocabulary:* fewer, less, penny, quart, taller
New Signs and Symbols: none	*New Signs and Symbols:* ¢ cent sign, cm centimeter/centimetre, in. inch, lb pound

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
Blank cells indicate data are limited or unavailable for this range or document version.

Subject: Mathematics
Goal Strand: Mathematical Processes
RIT Score Range: 171 - 180

Skills and Concepts to Enhance Below 171	Skills and Concepts to Develop 171 - 180	Skills and Concepts to Introduce 181 - 190
Problem Solving	**Problem Solving**	**Problem Solving**
• Solves real-world whole number addition problems with sums to 20 (result unknown) • Solves simple problems based on data from tables*	• Solves real-world whole number addition problems with sums to 20 (result unknown) • Solves real-world whole number addition problems with sums to 20 (start unknown)* • Solves real-world whole number addition problems with sums to 20 (change unknown)* • Solves real-world whole number addition problems with sums to 100 (result unknown)* • Solves real-world whole number addition problems with sums to 1000 • Solves real-world whole number problems involving subtraction with numbers under 20 • Solves simple problems based on data from pictographs • Solves simple problems based on data from bar graphs	• Solves problems using ordinal numbers* • Solves real-world whole number addition problems with sums to 20 (result unknown) - with extraneous information given • Solves real-world whole number addition problems with sums to 20 (start unknown)* • Solves real-world whole number addition problems with sums to 100 (result unknown)* • Solves real-world whole number addition problems with sums to 1000 • Solves real-world whole number problems involving subtraction with numbers under 20 • Solves real-world whole number problems involving subtraction with numbers 100 and under • Solves real-world whole number problems involving subtraction with numbers under 1000 • Solves word problems involving basic whole number multiplication facts to 10 x 10 • Solves word problems with whole number division facts with dividend and divisors less that 11 involving money • Solves real-world whole number problems involving addition and subtraction • Computes with dollars and cents up to and including $5.00 and converts to decimals (addition/subtraction only) • Computes 1 operation on addition or subtraction real-world problems involving money up to $5.00 • Solves simple problems based on data from tally charts* • Solves simple problems based on data from pictographs • Solves simple problems based on data from bar graphs
Communication, Connections, Reasoning	**Communication, Connections, Reasoning**	**Communication, Connections, Reasoning**
• Analyzes another student's explanation to understand	• Analyzes another student's explanation to understand	• Analyzes another student's explanation to understand

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
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simple problems* • Uses a structured model to solve problems using a variety of strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses manipulatives to model and justify solutions* • Follows a model of problem solving that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness*	simple problems* • Uses a structured model to solve problems using a variety of strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses appropriate technology to solve problems* • Uses words, pictures, numbers, and technology to explain the solution to problems* • Uses manipulatives to model and justify solutions* • Follows a model of problem solving that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness*	simple problems* • Draws pictures to represent whole number problems* • Uses manipulatives to represent whole number problems* • Uses a structured model to solve problems using a variety of strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses appropriate technology to solve problems* • Relates everyday language to mathematical language and symbols, and progresses toward the use of appropriate terminology (e.g., "add more" becomes "plus")* • Uses words, pictures, numbers, and technology to explain the solution to problems* • Uses manipulatives to model and justify solutions* • Follows a model of problem solving that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness*
New Vocabulary: table	*New Vocabulary:* fewer, less, penny, quart, taller	*New Vocabulary:* cost, fourth, product, subtrahend
New Signs and Symbols: none	*New Signs and Symbols:* ¢ cent sign, cm centimeter/centimetre, in. inch, lb pound	*New Signs and Symbols:* + addition, $ dollar sign, = is equal to, □ variable

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
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Subject: Mathematics
Goal Strand: Mathematical Processes
RIT Score Range: 181 - 190

Skills and Concepts to Enhance 171 - 180	Skills and Concepts to Develop 181 - 190	Skills and Concepts to Introduce 191 - 200
Problem Solving	**Problem Solving**	**Problem Solving**
• Solves real-world whole number addition problems with sums to 20 (result unknown) • Solves real-world whole number addition problems with sums to 20 (start unknown)* • Solves real-world whole number addition problems with sums to 20 (change unknown)* • Solves real-world whole number addition problems with sums to 100 (result unknown)* • Solves real-world whole number addition problems with sums to 1000 • Solves real-world whole number problems involving subtraction with numbers under 20 • Solves simple problems based on data from pictographs • Solves simple problems based on data from bar graphs	• Solves problems using ordinal numbers* • Solves real-world whole number addition problems with sums to 20 (result unknown) - with extraneous information given • Solves real-world whole number addition problems with sums to 20 (start unknown)* • Solves real-world whole number addition problems with sums to 100 (result unknown)* • Solves real-world whole number addition problems with sums to 1000 • Solves real-world whole number problems involving subtraction with numbers under 20 • Solves real-world whole number problems involving subtraction with numbers 100 and under • Solves real-world whole number problems involving subtraction with numbers under 1000 • Solves word problems involving basic whole number multiplication facts to 10 x 10 • Solves word problems with whole number division facts with dividend and divisors less that 11 involving money • Solves real-world whole number problems involving addition and subtraction • Computes with dollars and cents up to and including $5.00 and converts to decimals (addition/subtraction only) • Computes 1 operation on addition or subtraction real-world problems involving money up to $5.00 • Solves simple problems based on data from tally charts* • Solves simple problems based on data from pictographs • Solves simple problems based on data from bar graphs	• Solves problems using ordinal numbers* • Solves real-world whole number addition problems with sums to 20 (result unknown) - with extraneous information given • Solves real-world whole number addition problems with sums to 100 (start unknown)* • Solves whole number addition word problems with sums over 1000 • Solves real-world whole number problems involving subtraction with numbers 100 and under • Solves real-world whole number problems involving subtraction with numbers under 1000 • Solves whole number subtraction word problems with numbers over 1000 • Solves problems using the inverse relationship between addition and subtraction* • Solves word problems involving basic whole number multiplication facts to 10 x 10 • Solves word problems involving whole number multiplication with numbers greater than 10 x 10 • Solves word problems with whole number division facts with dividend and divisors less than 11 • Solves simple word problems involving whole number division with remainder (e.g., 1-step, 1-digit divisor)* • Solves real-world 1-step problems involving addition and subtraction of fractions with like denominators • Solves real-world problems involving decimals (not money) using addition and subtraction • Computes with dollars and cents up to and including $5.00 and converts to decimals (addition/subtraction only) • Computes 1 operation on real-world problems involving money over $5.00 (addition/subtraction only) • Solves simple problems involving elapsed time, with the conversion of hours

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
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		• Solves problems involving measurement of temperature • Solves simple problems involving the perimeter of squares, rectangles, or triangles • Solves problems using tables • Solves problems using tally charts*
Communication, Connections, Reasoning	**Communication, Connections, Reasoning**	**Communication, Connections, Reasoning**
• Analyzes another student's explanation to understand simple problems* • Uses a structured model to solve problems using a variety of strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses appropriate technology to solve problems* • Uses words, pictures, numbers, and technology to explain the solution to problems* • Uses manipulatives to model and justify solutions* • Follows a model of problem solving that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness*	• Analyzes another student's explanation to understand simple problems* • Draws pictures to represent whole number problems* • Uses manipulatives to represent whole number problems* • Uses a structured model to solve problems using a variety of strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses appropriate technology to solve problems* • Relates everyday language to mathematical language and symbols, and progresses toward the use of appropriate terminology (e.g., "add more" becomes "plus")* • Uses words, pictures, numbers, and technology to explain the solution to problems* • Uses manipulatives to model and justify solutions* • Follows a model of problem solving that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness*	• Analyzes another student's explanation to understand more difficult problems* • Draws pictures to represent whole number problems* • Uses a variety of problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses calculators as problem solving tools (e.g., to explore patterns, to validate solutions)* • Uses technology to gather, analyze, and communicate mathematical information* • Relates everyday language to mathematical language and symbols, and progresses toward the use of appropriate terminology (e.g., "add more" becomes "plus")* • Relates everyday language to mathematical language and symbols and progresses toward the use of appropriate terminology (e.g., "repeated addition" becomes "multiplication," "fair share" becomes "divide," "balance the equation" becomes "solve the equation")** • Verifies reasonableness of results of simple problems* • Looks for a simple linear pattern in a table to solve a problem • Uses a problem solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness*
New Vocabulary: fewer, less, penny, quart, taller	*New Vocabulary:* cost, fourth, product, subtrahend	*New Vocabulary:* capacity, deposit, latest, longer, rise
New Signs and Symbols: ¢ cent sign, cm centimeter/centimetre, in. inch, lb pound	*New Signs and Symbols:* + addition, $ dollar sign, = is equal to, □ variable	*New Signs and Symbols:* a.m., °C degrees Celsius, °F degrees Fahrenheit, ft feet, g gram, min minute, × multiplication, p.m., R remainder, – subtraction, | tally mark, : used with time, yd yard

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
Blank cells indicate data are limited or unavailable for this range or document version.

Subject: Mathematics
Goal Strand: Mathematical Processes
RIT Score Range: 191 - 200

Skills and Concepts to Enhance 181 - 190	Skills and Concepts to Develop 191 - 200	Skills and Concepts to Introduce 201 - 210
Problem Solving	**Problem Solving**	**Problem Solving**
• Solves problems using ordinal numbers* • Solves real-world whole number addition problems with sums to 20 (result unknown) - with extraneous information given • Solves real-world whole number addition problems with sums to 20 (start unknown)* • Solves real-world whole number addition problems with sums to 100 (result unknown)* • Solves real-world whole number addition problems with sums to 1000 • Solves real-world whole number problems involving subtraction with numbers under 20 • Solves real-world whole number problems involving subtraction with numbers 100 and under • Solves real-world whole number problems involving subtraction with numbers under 1000 • Solves word problems involving basic whole number multiplication facts to 10 x 10 • Solves word problems with whole number division facts with dividend and divisors less that 11 involving money • Solves real-world whole number problems involving addition and subtraction • Computes with dollars and cents up to and including $5.00 and converts to decimals (addition/subtraction only) • Computes 1 operation on addition or subtraction real-world problems involving money up to $5.00 • Solves simple problems based on data from tally charts* • Solves simple problems based on data from pictographs • Solves simple problems based on data from bar graphs	• Solves problems using ordinal numbers* • Solves real-world whole number addition problems with sums to 20 (result unknown) - with extraneous information given • Solves real-world whole number addition problems with sums to 100 (start unknown)* • Solves whole number addition word problems with sums over 1000 • Solves real-world whole number problems involving subtraction with numbers 100 and under • Solves real-world whole number problems involving subtraction with numbers under 1000 • Solves whole number subtraction word problems with numbers over 1000 • Solves problems using the inverse relationship between addition and subtraction* • Solves word problems involving basic whole number multiplication facts to 10 x 10 • Solves word problems involving whole number multiplication with numbers greater than 10 x 10 • Solves word problems with whole number division facts with dividend and divisors less than 11 • Solves simple word problems involving whole number division with remainder (e.g., 1-step, 1-digit divisor)* • Solves real-world 1-step problems involving addition and subtraction of fractions with like denominators • Solves real-world problems involving decimals (not money) using addition and subtraction • Computes with dollars and cents up to and including $5.00 and converts to decimals (addition/subtraction only) • Computes 1 operation on real-world problems involving money over $5.00 (addition/subtraction only) • Solves simple problems involving elapsed time, with the conversion of hours	• Solves problems using ordinal numbers* • Uses number sense strategies to solve problems (addition/subtraction only) • Solves real-world whole number addition problems with sums to 100 (start unknown)* • Solves real-world whole number problems involving subtraction with numbers 100 and under (analysis) • Solves whole number subtraction word problems with numbers over 1000 • Solves word problems involving whole number multiplication with numbers greater than 10 x 10 • Solves word problems with whole number division facts with dividend and divisors less than 11 • Solves simple word problems involving whole number division with remainder (e.g., 1-step, 1-digit divisor)* • Solves whole number word problems with division over 10 x 10 • Solves real-world problems involving 2-step multiple operations, whole numbers only • Solves real-world 1-step problems involving addition and subtraction of fractions with like denominators • Computes the value of multiple bills and coins (addition/subtraction only)* • Computes addition and subtraction on multiple-step real-world problems involving money • Applies dimensional analysis to simple real-world problems (time)* • Solves problems using a calendar* • Solves simple problems involving elapsed time, with the conversion of hours • Solves problems using tables • Solves problems using bar graphs • Solves problems using dual bar graphs* • Solves problems using line graphs*

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
Blank cells indicate data are limited or unavailable for this range or document version.

	• Solves problems involving measurement of temperature • Solves simple problems involving the perimeter of squares, rectangles, or triangles • Solves problems using tables • Solves problems using tally charts*	
Communication, Connections, Reasoning	**Communication, Connections, Reasoning**	**Communication, Connections, Reasoning**
• Analyzes another student's explanation to understand simple problems* • Draws pictures to represent whole number problems* • Uses manipulatives to represent whole number problems* • Uses a structured model to solve problems using a variety of strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses appropriate technology to solve problems* • Relates everyday language to mathematical language and symbols, and progresses toward the use of appropriate terminology (e.g., "add more" becomes "plus")* • Uses words, pictures, numbers, and technology to explain the solution to problems* • Uses manipulatives to model and justify solutions* • Follows a model of problem solving that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness*	• Analyzes another student's explanation to understand more difficult problems* • Draws pictures to represent whole number problems* • Uses a variety of problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses calculators as problem solving tools (e.g., to explore patterns, to validate solutions)* • Uses technology to gather, analyze, and communicate mathematical information* • Relates everyday language to mathematical language and symbols, and progresses toward the use of appropriate terminology (e.g., "add more" becomes "plus")* • Relates everyday language to mathematical language and symbols and progresses toward the use of appropriate terminology (e.g., "repeated addition" becomes "multiplication," "fair share" becomes "divide," "balance the equation" becomes "solve the equation")** • Verifies reasonableness of results of simple problems* • Looks for a simple linear pattern in a table to solve a problem • Uses a problem solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness*	• Analyzes another student's explanation to understand more difficult problems* • Draws pictures to represent whole number problems* • Uses manipulatives to represent problems* • Uses a variety of problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses calculators as problem solving tools (e.g., to explore patterns, to validate solutions)* • Uses technology to gather, analyze, and communicate mathematical information* • Relates everyday language to mathematical language and symbols and progresses toward the use of appropriate terminology (e.g., "repeated addition" becomes "multiplication," "fair share" becomes "divide," "balance the equation" becomes "solve the equation")** • Verifies reasonableness of results of simple problems* • Uses manipulatives and models to demonstrate thinking processes* • Looks for a linear pattern to solve a problem • Looks for a repeating pattern to solve a problem* • Solves real-world problems using reasoning strategies • Uses a problem solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness*
New Vocabulary: cost, fourth, product, subtrahend	*New Vocabulary:* capacity, deposit, latest, longer, rise	*New Vocabulary:* annual, kilogram, plus, remainder, square mile
New Signs and Symbols: + addition, $ dollar sign, = is equal to, □ variable	*New Signs and Symbols:* a.m., °C degrees Celsius, °F degrees Fahrenheit, ft feet, g gram, min minute, × multiplication, p.m., R remainder, – subtraction, | tally mark, : used with time, yd yard	*New Signs and Symbols:* kg kilogram

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
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Subject: Mathematics
Goal Strand: Mathematical Processes
RIT Score Range: 201 - 210

Skills and Concepts to Enhance 191 - 200	Skills and Concepts to Develop 201 - 210	Skills and Concepts to Introduce 211 - 220
Problem Solving	**Problem Solving**	**Problem Solving**
• Solves problems using ordinal numbers* • Solves real-world whole number addition problems with sums to 20 (result unknown) - with extraneous information given • Solves real-world whole number addition problems with sums to 100 (start unknown)* • Solves whole number addition word problems with sums over 1000 • Solves real-world whole number problems involving subtraction with numbers 100 and under • Solves real-world whole number problems involving subtraction with numbers under 1000 • Solves whole number subtraction word problems with numbers over 1000 • Solves problems using the inverse relationship between addition and subtraction* • Solves word problems involving basic whole number multiplication facts to 10 x 10 • Solves word problems involving whole number multiplication with numbers greater than 10 x 10 • Solves word problems with whole number division facts with dividend and divisors less than 11 • Solves simple word problems involving whole number division with remainder (e.g., 1-step, 1-digit divisor)* • Solves real-world 1-step problems involving addition and subtraction of fractions with like denominators • Solves real-world problems involving decimals (not money) using addition and subtraction • Computes with dollars and cents up to and including $5.00 and converts to decimals (addition/subtraction only) • Computes 1 operation on real-world problems involving money over $5.00 (addition/subtraction only) • Solves simple problems involving elapsed time, with the conversion of hours	• Solves problems using ordinal numbers* • Uses number sense strategies to solve problems (addition/subtraction only) • Solves real-world whole number addition problems with sums to 100 (start unknown)* • Solves real-world whole number problems involving subtraction with numbers 100 and under (analysis) • Solves whole number subtraction word problems with numbers over 1000 • Solves word problems involving whole number multiplication with numbers greater than 10 x 10 • Solves word problems with whole number division facts with dividend and divisors less than 11 • Solves simple word problems involving whole number division with remainder (e.g., 1-step, 1-digit divisor)* • Solves whole number word problems with division over 10 x 10 • Solves real-world problems involving 2-step multiple operations, whole numbers only • Solves real-world 1-step problems involving addition and subtraction of fractions with like denominators • Computes the value of multiple bills and coins (addition/subtraction only)* • Computes addition and subtraction on multiple-step real-world problems involving money • Applies dimensional analysis to simple real-world problems (time)* • Solves problems using a calendar* • Solves simple problems involving elapsed time, with the conversion of hours • Solves problems using tables • Solves problems using bar graphs • Solves problems using dual bar graphs* • Solves problems using line graphs*	• Uses number sense strategies to solve problems (multiplication/division)* • Evaluates number sense strategies used to solve problems* • Solves whole number word problems with division over 10 x 10 • Solves complex word problems involving whole number division with remainder (e.g., 2-step, 2-digit divisor) • Solves real-world problems involving 2-step multiple operations, whole numbers only • Solves real-world multiple-step problems involving whole numbers* • Solves real-world problems involving addition and subtraction of fractions where converting one denominator is necessary • Computes the value of multiple bills and coins (addition/subtraction only)* • Analyzes and computes 1 operation on real-world problems involving money over $5.00 (addition/subtraction only)* • Computes addition and subtraction on multiple-step real-world problems involving money • Apply dimensional analysis to simple real-world problems (length)* • Solves simple problems involving measurement of weight* • Apply dimensional analysis to simple real-world problems (weight/mass)* • Apply dimensional analysis to simple real-world problems (capacity)* • Solves simple problems involving capacity* • Applies dimensional analysis to simple real-world problems (time)* • Solves difficult problems involving elapsed time, with the conversion of hours

 NJ 3.3.1

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.

Blank cells indicate data are limited or unavailable for this range or document version.

• Solves problems involving measurement of temperature • Solves simple problems involving the perimeter of squares, rectangles, or triangles • Solves problems using tables • Solves problems using tally charts*		• Solves problems involving the perimeter of squares, rectangles, or triangles • Solves problems using pictographs* • Solves problems using bar graphs • Solves problems using line graphs* • Solves problems using circle graphs* • Solves simple problems involving mean
Communication, Connections, Reasoning	**Communication, Connections, Reasoning**	**Communication, Connections, Reasoning**
• Analyzes another student's explanation to understand more difficult problems* • Draws pictures to represent whole number problems* • Uses a variety of problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses calculators as problem solving tools (e.g., to explore patterns, to validate solutions)* • Uses technology to gather, analyze, and communicate mathematical information* • Relates everyday language to mathematical language and symbols, and progresses toward the use of appropriate terminology (e.g., "add more" becomes "plus")* • Relates everyday language to mathematical language and symbols and progresses toward the use of appropriate terminology (e.g., "repeated addition" becomes "multiplication," "fair share" becomes "divide," "balance the equation" becomes "solve the equation")** • Verifies reasonableness of results of simple problems* • Looks for a simple linear pattern in a table to solve a problem • Uses a problem solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness*	• Analyzes another student's explanation to understand more difficult problems* • Draws pictures to represent whole number problems* • Uses manipulatives to represent problems* • Uses a variety of problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses calculators as problem solving tools (e.g., to explore patterns, to validate solutions)* • Uses technology to gather, analyze, and communicate mathematical information* • Relates everyday language to mathematical language and symbols and progresses toward the use of appropriate terminology (e.g., "repeated addition" becomes "multiplication," "fair share" becomes "divide," "balance the equation" becomes "solve the equation")** • Verifies reasonableness of results of simple problems* • Uses manipulatives and models to demonstrate thinking processes* • Looks for a linear pattern to solve a problem • Looks for a repeating pattern to solve a problem* • Solves real-world problems using reasoning strategies • Uses a problem solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness*	• Analyzes another student's explanation to understand complex problems* • Uses pictures to represent problems* • Uses diagrams to represent problems • Uses systematic lists to represent problems* • Applies a variety of problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses technology to generate and analyze data to solve problems* • Expresses the solution clearly and logically by using the appropriate mathematical terms and notation* • Verifies reasonableness of results of more difficult problems* • Uses manipulatives and models to demonstrate thinking processes* • Looks for a growing pattern to solve a problem • Solves real-world problems using reasoning strategies • Applies a problem solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness*
New Vocabulary: capacity, deposit, latest, longer, rise	*New Vocabulary:* annual, kilogram, plus, remainder, square mile	*New Vocabulary:* coin, high, how long, interest, smaller, south, systematic list
New Signs and Symbols: a.m., °C degrees Celsius, °F degrees Fahrenheit, ft feet, g gram, min minute, × multiplication, p.m., R remainder, – subtraction, | tally mark, : used with time, yd yard	*New Signs and Symbols:* kg kilogram	*New Signs and Symbols:* $ dollar sign, : used with time, hr hour, ↓ measurement span down, ← measurement span left, → measurement span right, ↑ measurement span up

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
Blank cells indicate data are limited or unavailable for this range or document version.

Subject: Mathematics
Goal Strand: Mathematical Processes
RIT Score Range: 211 - 220

Skills and Concepts to Enhance 201 - 210	Skills and Concepts to Develop 211 - 220	Skills and Concepts to Introduce 221 - 230
Problem Solving	**Problem Solving**	**Problem Solving**
• Solves problems using ordinal numbers* • Uses number sense strategies to solve problems (addition/subtraction only) • Solves real-world whole number addition problems with sums to 100 (start unknown)* • Solves real-world whole number problems involving subtraction with numbers 100 and under (analysis) • Solves whole number subtraction word problems with numbers over 1000 • Solves word problems involving whole number multiplication with numbers greater than 10 x 10 • Solves word problems with whole number division facts with dividend and divisors less than 11 • Solves simple word problems involving whole number division with remainder (e.g., 1-step, 1-digit divisor)* • Solves whole number word problems with division over 10 x 10 • Solves real-world problems involving 2-step multiple operations, whole numbers only • Solves real-world 1-step problems involving addition and subtraction of fractions with like denominators • Computes the value of multiple bills and coins (addition/subtraction only)* • Computes addition and subtraction on multiple-step real-world problems involving money • Applies dimensional analysis to simple real-world problems (time)* • Solves problems using a calendar* • Solves simple problems involving elapsed time, with the conversion of hours • Solves problems using tables • Solves problems using bar graphs • Solves problems using dual bar graphs* • Solves problems using line graphs*	• Uses number sense strategies to solve problems (multiplication/division)* • Evaluates number sense strategies used to solve problems* • Solves whole number word problems with division over 10 x 10 • Solves complex word problems involving whole number division with remainder (e.g., 2-step, 2-digit divisor) • Solves real-world problems involving 2-step multiple operations, whole numbers only • Solves real-world multiple-step problems involving whole numbers* • Solves real-world problems involving addition and subtraction of fractions where converting one denominator is necessary • Computes the value of multiple bills and coins (addition/subtraction only)* • Analyzes and computes 1 operation on real-world problems involving money over $5.00 (addition/subtraction only)* • Computes addition and subtraction on multiple-step real-world problems involving money • Apply dimensional analysis to simple real-world problems (length)* • Solves simple problems involving measurement of weight* • Apply dimensional analysis to simple real-world problems (weight/mass)* • Apply dimensional analysis to simple real-world problems (capacity)* • Solves simple problems involving capacity* • Applies dimensional analysis to simple real-world problems (time)* • Solves difficult problems involving elapsed time, with the conversion of hours	• Uses number sense strategies to judge the reasonableness of given answers (multiplication/division only) • Solves complex word problems involving whole number division with remainder (e.g., 2-step, 2-digit divisor) • Uses division for multiple-step real-world problems (whole numbers)* • Solves real-world multiple-step problems involving whole numbers* • Solves real-world problems involving addition and subtraction of fractions where converting one denominator is necessary • Apply dimensional analysis to simple real-world problems (length)* • Solves problems involving length in the customary system and converts to larger or smaller units • Solves problems involving capacity in the customary system and converts to larger or smaller units* • Applies dimensional analysis to simple real-world problems (time)* • Solves difficult problems involving elapsed time, with the conversion of hours • Solves problems involving the perimeter of squares, rectangles, or triangles • Solves simple problems involving the area of a square or rectangle • Solves problems using circle graphs* • Solves simple problems involving mean

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Blank cells indicate data are limited or unavailable for this range or document version.

	• Solves problems involving the perimeter of squares, rectangles, or triangles • Solves problems using pictographs* • Solves problems using bar graphs • Solves problems using line graphs* • Solves problems using circle graphs* • Solves simple problems involving mean	
Communication, Connections, Reasoning	**Communication, Connections, Reasoning**	**Communication, Connections, Reasoning**
• Analyzes another student's explanation to understand more difficult problems* • Draws pictures to represent whole number problems* • Uses manipulatives to represent problems* • Uses a variety of problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses calculators as problem solving tools (e.g., to explore patterns, to validate solutions)* • Uses technology to gather, analyze, and communicate mathematical information* • Relates everyday language to mathematical language and symbols and progresses toward the use of appropriate terminology (e.g., "repeated addition" becomes "multiplication," "fair share" becomes "divide," "balance the equation" becomes "solve the equation")** • Verifies reasonableness of results of simple problems* • Uses manipulatives and models to demonstrate thinking processes* • Looks for a linear pattern to solve a problem • Looks for a repeating pattern to solve a problem* • Solves real-world problems using reasoning strategies • Uses a problem solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness*	• Analyzes another student's explanation to understand complex problems* • Uses pictures to represent problems* • Uses diagrams to represent problems • Uses systematic lists to represent problems* • Applies a variety of problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses technology to generate and analyze data to solve problems* • Expresses the solution clearly and logically by using the appropriate mathematical terms and notation* • Verifies reasonableness of results of more difficult problems* • Uses manipulatives and models to demonstrate thinking processes* • Looks for a growing pattern to solve a problem • Solves real-world problems using reasoning strategies • Applies a problem solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness*	• Analyzes another student's explanation to understand complex problems* • Uses pictures to represent problems* • Applies a variety of problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses technology to generate and analyze data to solve problems* • Organizes information from a paragraph to solve a problem* • Applies what was learned to a new and/or more complex problem* • Expresses the solution clearly and logically by using the appropriate mathematical terms and notation* • Verifies reasonableness of results of more difficult problems* • Looks for a growing pattern to solve a problem • Solves real-world problems using reasoning strategies • Applies a problem solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness*
New Vocabulary: annual, kilogram, plus, remainder, square mile	*New Vocabulary:* coin, high, how long, interest, smaller, south, systematic list	*New Vocabulary:* cubic feet, cubic inch, rectangular shape
New Signs and Symbols: kg kilogram	*New Signs and Symbols:* $ dollar sign, : used with time, hr hour, ↓ measurement span down, ← measurement span left, → measurement span right, ↑ measurement span up	*New Signs and Symbols:* ' feet, gal gallon

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Subject: Mathematics
Goal Strand: Mathematical Processes
RIT Score Range: 221 - 230

Skills and Concepts to Enhance 211 - 220	Skills and Concepts to Develop 221 - 230	Skills and Concepts to Introduce 231 - 240
Problem Solving	**Problem Solving**	**Problem Solving**
• Uses number sense strategies to solve problems (multiplication/division)* • Evaluates number sense strategies used to solve problems* • Solves whole number word problems with division over 10 x 10 • Solves complex word problems involving whole number division with remainder (e.g., 2-step, 2-digit divisor) • Solves real-world problems involving 2-step multiple operations, whole numbers only • Solves real-world multiple-step problems involving whole numbers* • Solves real-world problems involving addition and subtraction of fractions where converting one denominator is necessary • Computes the value of multiple bills and coins (addition/subtraction only)* • Analyzes and computes 1 operation on real-world problems involving money over $5.00 (addition/subtraction only)* • Computes addition and subtraction on multiple-step real-world problems involving money • Apply dimensional analysis to simple real-world problems (length)* • Solves simple problems involving measurement of weight* • Apply dimensional analysis to simple real-world problems (weight/mass)* • Apply dimensional analysis to simple real-world problems (capacity)* • Solves simple problems involving capacity* • Applies dimensional analysis to simple real-world problems (time)* • Solves difficult problems involving elapsed time, with the conversion of hours	• Uses number sense strategies to judge the reasonableness of given answers (multiplication/division only) • Solves complex word problems involving whole number division with remainder (e.g., 2-step, 2-digit divisor) • Uses division for multiple-step real-world problems (whole numbers)* • Solves real-world multiple-step problems involving whole numbers* • Solves real-world problems involving addition and subtraction of fractions where converting one denominator is necessary • Apply dimensional analysis to simple real-world problems (length)* • Solves problems involving length in the customary system and converts to larger or smaller units • Solves problems involving capacity in the customary system and converts to larger or smaller units* • Applies dimensional analysis to simple real-world problems (time)* • Solves difficult problems involving elapsed time, with the conversion of hours • Solves problems involving the perimeter of squares, rectangles, or triangles • Solves simple problems involving the area of a square or rectangle • Solves problems using circle graphs* • Solves simple problems involving mean	• Solves real-world problems involving addition and subtraction of fractions where converting both denominators is necessary • Solves problems involving length in the customary system and converts to larger or smaller units • Solves problems involving length in the metric system and converts to larger or smaller units* • Solves problems involving weight in the customary system and converts to larger or smaller units • Solves problems involving capacity in the customary system and converts to larger or smaller units* • Solves simple problems involving the area of a square or rectangle

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• Solves problems involving the perimeter of squares, rectangles, or triangles • Solves problems using pictographs* • Solves problems using bar graphs • Solves problems using line graphs* • Solves problems using circle graphs* • Solves simple problems involving mean		
Communication, Connections, Reasoning	**Communication, Connections, Reasoning**	**Communication, Connections, Reasoning**
• Analyzes another student's explanation to understand complex problems* • Uses pictures to represent problems* • Uses diagrams to represent problems • Uses systematic lists to represent problems* • Applies a variety of problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses technology to generate and analyze data to solve problems* • Expresses the solution clearly and logically by using the appropriate mathematical terms and notation* • Verifies reasonableness of results of more difficult problems* • Uses manipulatives and models to demonstrate thinking processes* • Looks for a growing pattern to solve a problem • Solves real-world problems using reasoning strategies • Applies a problem solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness*	• Analyzes another student's explanation to understand complex problems* • Uses pictures to represent problems* • Applies a variety of problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses technology to generate and analyze data to solve problems* • Organizes information from a paragraph to solve a problem* • Applies what was learned to a new and/or more complex problem* • Expresses the solution clearly and logically by using the appropriate mathematical terms and notation* • Verifies reasonableness of results of more difficult problems* • Looks for a growing pattern to solve a problem • Solves real-world problems using reasoning strategies • Applies a problem solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness*	• Uses pictures to represent problems* • Applies the most appropriate problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses technology to organize, record, and communicate mathematical ideas* • Organizes information from a paragraph to solve a problem* • Analyzes complex problems to separate into simpler parts* • Verifies reasonableness of results of complex problems* • Uses the components of mathematical modeling (e.g., problem formulation, mathematical model, solution within the model, interpretation of solution within the model, validation in original real-world problem situation)*
New Vocabulary: coin, high, how long, interest, smaller, south, systematic list	*New Vocabulary:* cubic feet, cubic inch, rectangular shape	*New Vocabulary:* none
New Signs and Symbols: $ dollar sign, : used with time, hr hour, ↓ measurement span down, ← measurement span left, → measurement span right, ↑ measurement span up	*New Signs and Symbols:* ' feet, gal gallon	*New Signs and Symbols:* oz ounce

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Subject: Mathematics
Goal Strand: Mathematical Processes
RIT Score Range: 231 - 240

Skills and Concepts to Enhance 221 - 230	Skills and Concepts to Develop 231 - 240	Skills and Concepts to Introduce 241 - 250
Problem Solving	**Problem Solving**	**Problem Solving**
• Uses number sense strategies to judge the reasonableness of given answers (multiplication/division only) • Solves complex word problems involving whole number division with remainder (e.g., 2-step, 2-digit divisor) • Uses division for multiple-step real-world problems (whole numbers)* • Solves real-world multiple-step problems involving whole numbers* • Solves real-world problems involving addition and subtraction of fractions where converting one denominator is necessary • Apply dimensional analysis to simple real-world problems (length)* • Solves problems involving length in the customary system and converts to larger or smaller units • Solves problems involving capacity in the customary system and converts to larger or smaller units* • Applies dimensional analysis to simple real-world problems (time)* • Solves difficult problems involving elapsed time, with the conversion of hours • Solves problems involving the perimeter of squares, rectangles, or triangles • Solves simple problems involving the area of a square or rectangle • Solves problems using circle graphs* • Solves simple problems involving mean	• Solves real-world problems involving addition and subtraction of fractions where converting both denominators is necessary • Solves problems involving length in the customary system and converts to larger or smaller units • Solves problems involving length in the metric system and converts to larger or smaller units* • Solves problems involving weight in the customary system and converts to larger or smaller units • Solves problems involving capacity in the customary system and converts to larger or smaller units* • Solves simple problems involving the area of a square or rectangle	• Solves problems involving length in the metric system and converts to larger or smaller units* • Solves problems involving weight in the customary system and converts to larger or smaller units • Solves problems involving capacity in the metric system and converts to larger or smaller units* • Solves problems involving measurement of angles* • Solves problems involving the perimeter of squares, rectangles, or triangles (analysis) • Solves problems involving area of a rectangle and converts to larger or smaller units (customary)
Communication, Connections, Reasoning	**Communication, Connections, Reasoning**	**Communication, Connections, Reasoning**
• Analyzes another student's explanation to understand complex problems* • Uses pictures to represent problems* • Applies a variety of problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or	• Uses pictures to represent problems* • Applies the most appropriate problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and	• Uses algebraic representations to model and interpret mathematical and real-world situations* • Applies the most appropriate problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem

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organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses technology to generate and analyze data to solve problems* • Organizes information from a paragraph to solve a problem* • Applies what was learned to a new and/or more complex problem* • Expresses the solution clearly and logically by using the appropriate mathematical terms and notation* • Verifies reasonableness of results of more difficult problems* • Looks for a growing pattern to solve a problem • Solves real-world problems using reasoning strategies • Applies a problem solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness*	error, works backwards, uses models)* • Uses technology to organize, record, and communicate mathematical ideas* • Organizes information from a paragraph to solve a problem* • Analyzes complex problems to separate into simpler parts* • Verifies reasonableness of results of complex problems* • Uses the components of mathematical modeling (e.g., problem formulation, mathematical model, solution within the model, interpretation of solution within the model, validation in original real-world problem situation)*	simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses technology to organize, record, and communicate mathematical ideas* • Verifies reasonableness of results of complex problems* • Uses reasoning strategies to solve problems* • Uses the components of mathematical modeling (e.g., problem formulation, mathematical model, solution within the model, interpretation of solution within the model, validation in original real-world problem situation)*
New Vocabulary: cubic feet, cubic inch, rectangular shape	*New Vocabulary:* none	*New Vocabulary:* linear foot, rectangular area
New Signs and Symbols: ' feet, gal gallon	*New Signs and Symbols:* oz ounce	*New Signs and Symbols:* L liter/litre, m meter/metre, mL milliliter/millilitre, right angle marker

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Subject: Mathematics
Goal Strand: Mathematical Processes
RIT Score Range: 241 - 250

Skills and Concepts to Enhance 231 - 240	Skills and Concepts to Develop 241 - 250	Skills and Concepts to Introduce 251 - 260
Problem Solving	**Problem Solving**	**Problem Solving**
• Solves real-world problems involving addition and subtraction of fractions where converting both denominators is necessary • Solves problems involving length in the customary system and converts to larger or smaller units • Solves problems involving length in the metric system and converts to larger or smaller units* • Solves problems involving weight in the customary system and converts to larger or smaller units • Solves problems involving capacity in the customary system and converts to larger or smaller units* • Solves simple problems involving the area of a square or rectangle	• Solves problems involving length in the metric system and converts to larger or smaller units* • Solves problems involving weight in the customary system and converts to larger or smaller units • Solves problems involving capacity in the metric system and converts to larger or smaller units* • Solves problems involving measurement of angles* • Solves problems involving the perimeter of squares, rectangles, or triangles (analysis) • Solves problems involving area of a rectangle and converts to larger or smaller units (customary)	• Solves complex real-world problems involving capacity*
Communication, Connections, Reasoning	**Communication, Connections, Reasoning**	**Communication, Connections, Reasoning**
• Uses pictures to represent problems* • Applies the most appropriate problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses technology to organize, record, and communicate mathematical ideas* • Organizes information from a paragraph to solve a problem* • Analyzes complex problems to separate into simpler parts* • Verifies reasonableness of results of complex problems* • Uses the components of mathematical modeling (e.g., problem formulation, mathematical model, solution within the model, interpretation of solution within the model, validation in original real-world problem situation)*	• Uses algebraic representations to model and interpret mathematical and real-world situations* • Applies the most appropriate problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses technology to organize, record, and communicate mathematical ideas* • Verifies reasonableness of results of complex problems* • Uses reasoning strategies to solve problems* • Uses the components of mathematical modeling (e.g., problem formulation, mathematical model, solution within the model, interpretation of solution within the model, validation in original real-world problem situation)*	• Uses algebraic representations to model and interpret mathematical and real-world situations* • Uses graphic representations to model and interpret mathematical and real-world situations* • Applies the most appropriate problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses technology to organize, record, and communicate mathematical ideas* • Verifies reasonableness of results of complex problems* • Uses reasoning strategies to solve problems* • Uses the components of mathematical modeling (e.g., problem formulation, mathematical model, solution within the model, interpretation of solution within the model, validation in original real-world problem situation)*
New Vocabulary: none	*New Vocabulary:* linear foot, rectangular area	*New Vocabulary:* none
New Signs and Symbols: oz ounce	*New Signs and Symbols:* L liter/litre, m meter/metre, mL milliliter/millilitre, right angle marker	*New Signs and Symbols:* ≈ approximately equal to

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Subject: Mathematics
Goal Strand: Mathematical Processes
RIT Score Range: 251 - 260

Skills and Concepts to Enhance 241 - 250	Skills and Concepts to Develop 251 - 260	Skills and Concepts to Introduce Above 260
Problem Solving	**Problem Solving**	**Problem Solving**
• Solves problems involving length in the metric system and converts to larger or smaller units* • Solves problems involving weight in the customary system and converts to larger or smaller units • Solves problems involving capacity in the metric system and converts to larger or smaller units* • Solves problems involving measurement of angles* • Solves problems involving the perimeter of squares, rectangles, or triangles (analysis) • Solves problems involving area of a rectangle and converts to larger or smaller units (customary)	• Solves complex real-world problems involving capacity*	
Communication, Connections, Reasoning	**Communication, Connections, Reasoning**	**Communication, Connections, Reasoning**
• Uses algebraic representations to model and interpret mathematical and real-world situations* • Applies the most appropriate problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses technology to organize, record, and communicate mathematical ideas* • Verifies reasonableness of results of complex problems* • Uses reasoning strategies to solve problems* • Uses the components of mathematical modeling (e.g., problem formulation, mathematical model, solution within the model, interpretation of solution within the model, validation in original real-world problem situation)*	• Uses algebraic representations to model and interpret mathematical and real-world situations* • Uses graphic representations to model and interpret mathematical and real-world situations* • Applies the most appropriate problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses technology to organize, record, and communicate mathematical ideas* • Verifies reasonableness of results of complex problems* • Uses reasoning strategies to solve problems* • Uses the components of mathematical modeling (e.g., problem formulation, mathematical model, solution within the model, interpretation of solution within the model, validation in original real-world problem situation)*	• Uses technology to organize, record, and communicate mathematical ideas*
New Vocabulary: linear foot, rectangular area	*New Vocabulary:* none	*New Vocabulary:* none
New Signs and Symbols: L liter/litre, m meter/metre, mL milliliter/millilitre, right angle marker	*New Signs and Symbols:* ≈ approximately equal to	*New Signs and Symbols:* none

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Subject: Mathematics
Goal Strand: Mathematical Processes
RIT Score Range: Above 260

Skills and Concepts to Enhance 251 - 260	Skills and Concepts to Develop Above 260
Problem Solving	**Problem Solving**
• Solves complex real-world problems involving capacity*	
Communication, Connections, Reasoning	**Communication, Connections, Reasoning**
• Uses algebraic representations to model and interpret mathematical and real-world situations* • Uses graphic representations to model and interpret mathematical and real-world situations* • Applies the most appropriate problem solving strategies (e.g., draws a picture, looks for patterns, makes a table or organized list, makes a problem simpler, uses process of elimination, uses trial and error, works backwards, uses models)* • Uses technology to organize, record, and communicate mathematical ideas* • Verifies reasonableness of results of complex problems* • Uses reasoning strategies to solve problems* • Uses the components of mathematical modeling (e.g., problem formulation, mathematical model, solution within the model, interpretation of solution within the model, validation in original real-world problem situation)*	• Uses technology to organize, record, and communicate mathematical ideas*
New Vocabulary: none	*New Vocabulary:* none
New Signs and Symbols: ≈ approximately equal to	*New Signs and Symbols:* none

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