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Mathematics 2–5

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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* • Adds two 1-digit numbers with sums to 10 in horizontal format	• 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* • 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* • Solves real-world whole number addition problems with sums to 20 (result unknown)

	• Uses models to construct subtraction facts with differences through 10 (whole numbers)* • Uses models to calculate differences through 100 (whole numbers)* • 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 • Instantly recalls basic multiplication facts where one factor is 0-5 and the other factor is 0-12 • Adds money vertically with no regrouping*
New Vocabulary: none	*New Vocabulary*: none
New Signs and Symbols: none	*New Signs and Symbols*: + addition, $ dollar sign, = is equal to, × multiplication, − subtraction, □ variable

Subject: Mathematics
Goal Strand: Number and Computation
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: Integers, Fractions, Decimals	Number Sense: Integers, Fractions, Decimals	Number Sense: Integers, Fractions, Decimals
	• Counts ordinal numbers (1st to 10th) • Orders whole numbers less than 10*	• Identifies the numeral and written name for ordinal numbers 1st to 20th (e.g., 1st is first, and vice versa)* • Counts ordinal numbers (first to tenth) • Identifies the ordinal number that comes before, between, or after a given ordinal number (first to tenth)* • Writes equivalent forms of whole number expressions (e.g., 15 + 5 = 10 + 10) • Compares whole numbers through100* • Compares whole numbers through 999 • Orders sets of objects 0-10* • Orders sets of objects 0-20* • Represents 1/2 with a diagram or model • Identifies equivalent fractions using visual representations* • 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)
Number Systems and Their Properties	Number Systems and Their Properties	Number Systems and Their Properties
• Counts numbers 0-20*	• Counts numbers 0-20* • Writes whole numbers in standard and expanded form through the tens	• 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)* • Counts numbers 0-100 • Counts numbers 0-1000* • Counts backwards from a given number (given number greater than 10)* • Identifies a whole number that comes between 2 given numbers (20 to 100)* • Identifies the place value and value of each digit in whole numbers through the tens place*

Computational Estimation & Estimation Strategies	Computational Estimation & Estimation Strategies	Computational Estimation & Estimation Strategies
Computation: Whole Numbers, Fractions and Decimals	**Computation: Whole Numbers, Fractions and Decimals**	**Computation: Whole Numbers, Fractions and Decimals**
• Uses models to construct whole number addition facts with addends through 10* • Uses models to calculate whole number sums through 99* • Adds two 1-digit numbers with sums to 10 in horizontal format	• 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* • 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* • Solves real-world whole number addition problems with sums to 20 (result unknown) • Uses models to construct subtraction facts with differences through 10 (whole numbers)* • Uses models to calculate differences through 100 (whole numbers)* • 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 • Instantly recalls basic multiplication facts where one factor is 0-5 and the other factor is 0-12 • Adds money vertically with no regrouping*	• Uses a number line to construct addition facts with sums through 20 (whole numbers)* • Uses models to calculate whole number sums through 999* • 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- and/or 2-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* • 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 • Uses models to calculate differences through 100 (whole numbers)* • Uses models to calculate differences through 1000 (whole numbers)* • 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 - Solves real-world whole number problems involving subtraction with numbers under 20 - 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 - Recognizes addition and subtraction fact families through 18 - Demonstrates an understanding that vertical and horizontal representations are equivalent - Adds money vertically with no regrouping*
New Vocabulary: none	*New Vocabulary*: none	*New Vocabulary*: before, between, fact family, hundred, seventh, thousand
New Signs and Symbols: none	*New Signs and Symbols*: + addition, $ dollar sign, = is equal to, × multiplication, – subtraction, ☐ variable	*New Signs and Symbols*: ¢ cent sign, lb pound

Subject: Mathematics

Goal Strand: Number and Computation

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: Integers, Fractions, Decimals	Number Sense: Integers, Fractions, Decimals	Number Sense: Integers, Fractions, Decimals
• Counts ordinal numbers (1st to 10th) • Orders whole numbers less than 10*	• Identifies the numeral and written name for ordinal numbers 1st to 20th (e.g., 1st is first, and vice versa)* • Counts ordinal numbers (first to tenth) • Identifies the ordinal number that comes before, between, or after a given ordinal number (first to tenth)* • Writes equivalent forms of whole number expressions (e.g., 15 + 5 = 10 + 10) • Compares whole numbers through100* • Compares whole numbers through 999 • Orders sets of objects 0-10* • Orders sets of objects 0-20* • Represents 1/2 with a diagram or model • Identifies equivalent fractions using visual representations* • 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)	• Counts ordinal numbers (first to tenth) • Identifies the ordinal number that comes before, between, or after a given ordinal number (first to tenth)* • Writes equivalent forms of whole numbers 11 to 20 using addition (e.g., 14 = 7 + 7)* • 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* • Solves problems using ordinal numbers* • 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, 8, 10) from a region or set • Compares and orders decimals to the hundredths place (same number of digits after decimal) • Uses rounding to estimate answers to real-world problems involving addition of numbers less than 100 (whole numbers only) • 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 • Identifies the value of a collection of coins to $1.00 (without picture of coins) • 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
Number Systems and Their Properties	**Number Systems and Their Properties**	**Number Systems and Their Properties**
• Counts numbers 0-20* • Writes whole numbers in standard and expanded form through the tens	• 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)* • Counts numbers 0-100 • Counts numbers 0-1000* • Counts backwards from a given number (given number greater than 10)* • Identifies a whole number that comes between 2 given numbers (20 to 100)* • Identifies the place value and value of each digit in whole numbers through the tens place*	• 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 • Counts numbers 0-1000* • Writes equivalent forms of whole numbers using multiplication (e.g., 12 = 4 x 3 = 2 x 6 = 2 x 2 x 3)* • 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 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 • Distinguishes between odd and even numbers • Demonstrates an understanding of the zero property of multiplication
Computational Estimation & Estimation Strategies	**Computational Estimation & Estimation Strategies**	**Computational Estimation & Estimation Strategies**
Computation: Whole Numbers, Fractions and Decimals	**Computation: Whole Numbers, Fractions and Decimals**	**Computation: Whole Numbers, Fractions and Decimals**
• 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* • Adds two 1-digit numbers with sums to 10 in horizontal format	• Uses a number line to construct addition facts with sums through 20 (whole numbers)* • Uses models to calculate whole number sums through 999* • 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,	• 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,

- 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*
- Solves real-world whole number addition problems with sums to 20 (result unknown)
- Uses models to construct subtraction facts with differences through 10 (whole numbers)*
- Uses models to calculate differences through 100 (whole numbers)*
- 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
- Instantly recalls basic multiplication facts where one factor is 0-5 and the other factor is 0-12
- Adds money vertically with no regrouping*

- with sums under 1000*
- Adds two or three 2-digit number with regrouping
- Adds 1- and/or 2-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*
- 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
- Uses models to calculate differences through 100 (whole numbers)*
- Uses models to calculate differences through 1000 (whole numbers)*
- 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
- Solves real-world whole number problems involving subtraction with numbers under 20
- 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
- Recognizes addition and subtraction fact families through 18
- Demonstrates an understanding that vertical and horizontal representations are equivalent
- Adds money vertically with no regrouping*

- with sums over 1000
- Adds multiple-digit numbers, with regrouping, with sums over 1000
- 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
- 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)*
- Instantly recalls basic subtraction facts with minuend less than 10*
- Subtracts a 1-digit number from a multiple-digit number*
- Subtracts a 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*
- 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
- Multiplies basic facts to 10 x 10 vertically
- Multiplies a 2-digit number by a 1-digit number with regrouping
- Solves word problems involving basic whole number multiplication facts to 10 x 10

		• 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) • Instantly recalls division facts with dividend and divisors less than 10 • Recognizes addition and subtraction fact families through 18 • Demonstrates an understanding of the inverse relationship between multiplication and division • Adds decimals to the hundredths place (same number of digits) • Adds money with regrouping • Subtracts decimals to the hundredths place (same number of digits) without regrouping • Makes change to $1.00 by "counting on" or subtracting • 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
New Vocabulary: none	*New Vocabulary*: before, between, fact family, hundred, seventh, thousand	*New Vocabulary*: changed, digit, fourth, fourths, gave, left, million, odd number, one, pennies, row, smallest, symmetrical, ten thousand, third, thirds, unifix cubes
New Signs and Symbols: + addition, $ dollar sign, = is equal to, × multiplication, − subtraction, ▢ variable	*New Signs and Symbols*: ¢ cent sign, lb pound	*New Signs and Symbols*: { } set notation, ÷ division, long division symbol

Subject: Mathematics
Goal Strand: Number and Computation
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: Integers, Fractions, Decimals	Number Sense: Integers, Fractions, Decimals	Number Sense: Integers, Fractions, Decimals
• Identifies the numeral and written name for ordinal numbers 1st to 20th (e.g., 1st is first, and vice versa)* • Counts ordinal numbers (first to tenth) • Identifies the ordinal number that comes before, between, or after a given ordinal number (first to tenth)* • Writes equivalent forms of whole number expressions (e.g., 15 + 5 = 10 + 10) • Compares whole numbers through100* • Compares whole numbers through 999 • Orders sets of objects 0-10* • Orders sets of objects 0-20* • Represents 1/2 with a diagram or model • Identifies equivalent fractions using visual representations* • 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)	• Counts ordinal numbers (first to tenth) • Identifies the ordinal number that comes before, between, or after a given ordinal number (first to tenth)* • Writes equivalent forms of whole numbers 11 to 20 using addition (e.g., 14 = 7 + 7)* • 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* • Solves problems using ordinal numbers* • 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 • Compares and orders decimals to the hundredths place (same number of digits after decimal) • Uses rounding to estimate answers to real-world problems involving addition of numbers less than 100 (whole numbers only) • 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 • Identifies the value of a collection of coins to $1.00 (without picture of coins) • Identifies the value of a collection of coins and bills to	• Writes equivalent forms of whole numbers 11 to 20 using addition (e.g., 14 = 7 + 7)* • Compares whole numbers through 999,999 • Orders whole numbers less than 1000* • Orders whole numbers less than 10,000 • Solves problems using ordinal numbers* • 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 • Matches numeric and visual representation of equivalent fractions • Compares and orders money in decimal form • Compares and orders decimals to the thousandths place (same number of digits after decimal)* • Uses rounding to estimate answers to real-world problems involving numbers less than 1000 with addition and subtraction (whole numbers only)* • Solves whole number subtraction word problems with numbers over 1000 • Solves problems using the inverse relationship between addition and subtraction* • 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 1-step problems involving multiplication or division of a whole number by a fraction*

	$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	• Identifies the value of a collection of coins to $1.00 (without picture of coins) • 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*
Number Systems and Their Properties	**Number Systems and Their Properties**	**Number Systems and Their Properties**
• 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)* • Counts numbers 0-100 • Counts numbers 0-1000* • Counts backwards from a given number (given number greater than 10)* • Identifies a whole number that comes between 2 given numbers (20 to 100)* • Identifies the place value and value of each digit in whole numbers through the tens place*	• 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 • Counts numbers 0-1000* • Writes equivalent forms of whole numbers using multiplication (e.g., 12 = 4 x 3 = 2 x 6 = 2 x 2 x 3)* • 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 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 • Distinguishes between odd and even numbers • Demonstrates an understanding of the zero property of multiplication	• 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 • Writes equivalent forms of whole numbers using multiplication (e.g., 12 = 4 x 3 = 2 x 6 = 2 x 2 x 3)* • 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 • Distinguishes between odd and even numbers • Identifies numbers as composite • 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)
Computational Estimation & Estimation Strategies	**Computational Estimation & Estimation Strategies**	**Computational Estimation & Estimation Strategies**
		• Compares sets of objects and identifies which is equal

		to, more than, or less than the other (1 to 10 objects)*
		• 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)
Computation: Whole Numbers, Fractions and Decimals	**Computation: Whole Numbers, Fractions and Decimals**	**Computation: Whole Numbers, Fractions and Decimals**
• Uses a number line to construct addition facts with sums through 20 (whole numbers)* • Uses models to calculate whole number sums through 999* • 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- and/or 2-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* • 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 • Uses models to calculate differences through 100 (whole numbers)* • Uses models to calculate differences through 1000 (whole numbers)* • Subtracts a 1-digit number from a 2-digit number that	• 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 • 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 • 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)* • Instantly recalls basic subtraction facts with minuend less than 10* • Subtracts a 1-digit number from a multiple-digit number* • Subtracts a 1-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 • 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 • Uses a number line to construct subtraction facts with subtrahends and minuends through 20 (whole numbers)* • Adds and subtracts whole numbers using place value • Subtracts a 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 • Performs mental subtraction with numbers 1000 and

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 • Solves real-world whole number problems involving subtraction with numbers under 20 • 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 • Recognizes addition and subtraction fact families through 18 • Demonstrates an understanding that vertical and horizontal representations are equivalent • Adds money vertically with no 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* • 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 • Multiplies basic facts to 10 x 10 vertically • Multiplies a 2-digit number by a 1-digit number with regrouping • Solves word problems involving basic whole number multiplication facts to 10 x 10 • 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) • Instantly recalls division facts with dividend and divisors less than 10 • Recognizes addition and subtraction fact families through 18 • Demonstrates an understanding of the inverse relationship between multiplication and division • Adds decimals to the hundredths place (same number of digits) • Adds money with regrouping • Subtracts decimals to the hundredths place (same number of digits) without regrouping • Makes change to $1.00 by "counting on" or subtracting • 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	over • Subtracts multiple-digit numbers with no regrouping* • 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 • 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 • 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 • Uses repeated subtraction for division* • Models whole number multiplication and division algorithms (e.g., shows multiplication as repeated addition and division as repeated subtraction) • 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) • Uses models to add and subtract fractions and connect the actions to algorithms* • 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

		• Adds money with 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 • Makes change to $1.00 by "counting on" or subtracting • 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) • Multiplies a decimal by whole number • Computes half price (multiplication/division)* • Computes with dollars and cents up to and including $5.00 and converts to decimals (multiplication/division) • Computes 1 operation on real-world problems involving money over $5.00 (multiplication/division)
New Vocabulary: before, between, fact family, hundred, seventh, thousand	*New Vocabulary*: changed, digit, fourth, fourths, gave, left, million, odd number, one, pennies, row, smallest, symmetrical, ten thousand, third, thirds, unifix cubes	*New Vocabulary*: billion, capacity, composite number, deposit, each, hundred million, longer, prime number, quintillion, standard numeral, thousands, trillion
New Signs and Symbols: ¢ cent sign, lb pound	*New Signs and Symbols*: { } set notation, ÷ division, long division symbol	*New Signs and Symbols*: ( ) order of operations, ft feet, R remainder

Subject: Mathematics
Goal Strand: Number and Computation
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: Integers, Fractions, Decimals	Number Sense: Integers, Fractions, Decimals	Number Sense: Integers, Fractions, Decimals
• Counts ordinal numbers (first to tenth) • Identifies the ordinal number that comes before, between, or after a given ordinal number (first to tenth)* • Writes equivalent forms of whole numbers 11 to 20 using addition (e.g., 14 = 7 + 7)* • 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* • Solves problems using ordinal numbers* • 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 • Compares and orders decimals to the hundredths place (same number of digits after decimal) • Uses rounding to estimate answers to real-world problems involving addition of numbers less than 100 (whole numbers only) • 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 • Identifies the value of a collection of coins to $1.00 (without picture of coins) • Identifies the value of a collection of coins and bills to	• Writes equivalent forms of whole numbers 11 to 20 using addition (e.g., 14 = 7 + 7)* • Compares whole numbers through 999,999 • Orders whole numbers less than 1000* • Orders whole numbers less than 10,000 • Solves problems using ordinal numbers* • 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 • Matches numeric and visual representation of equivalent fractions • Compares and orders money in decimal form • Compares and orders decimals to the thousandths place (same number of digits after decimal)* • Uses rounding to estimate answers to real-world problems involving numbers less than 1000 with addition and subtraction (whole numbers only)* • Solves whole number subtraction word problems with numbers over 1000 • Solves problems using the inverse relationship between addition and subtraction* • 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 1-step problems involving multiplication or division of a whole number by a fraction*	• 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 • Solves problems using ordinal numbers* • Identifies halves of a region using nonadjacent parts • Converts a basic fractional numeral to lowest terms (e.g., halves, thirds, quarters)* • Writes mixed numbers as improper fractions and improper fractions as mixed numbers • Compares fractions (e.g., common denominator, 1 in the numerator, denominator is 2, 3, 4, 6, 8, 10) • Compares integers on a number line* • Orders integers on a number line* • Writes a terminating decimal as a fraction or mixed number • Writes a number "squared" in factored form* • Uses rounding to estimate answers to real-world problems involving numbers 1000 or greater with addition and subtraction (whole numbers only)* • Solves whole number subtraction word problems with numbers over 1000 • Uses a number line to model multiplication (whole numbers)* • 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 1-step problems involving addition and subtraction of fractions with like denominators • Finds equivalent combinations of dollars and cents with the same value*

$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	• Identifies the value of a collection of coins to $1.00 (without picture of coins) • 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*	• Computes addition and subtraction on multiple-step real-world problems involving money • Computes money problems with multiple operations (addition/subtraction only) • Computes addition, subtraction, multiplication, and division on multiple-step, real-world problems involving money
Number Systems and Their Properties	**Number Systems and Their Properties**	**Number Systems and Their Properties**
• 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 • Counts numbers 0-1000* • Writes equivalent forms of whole numbers using multiplication (e.g., 12 = 4 x 3 = 2 x 6 = 2 x 2 x 3)* • 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 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 • Distinguishes between odd and even numbers • Demonstrates an understanding of the zero property of multiplication	• 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 • Writes equivalent forms of whole numbers using multiplication (e.g., 12 = 4 x 3 = 2 x 6 = 2 x 2 x 3)* • 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 • Distinguishes between odd and even numbers • Identifies numbers as composite • 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)	• 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)* • Writes whole numbers in standard and expanded form through the hundred thousands • Applies base ten place value concepts with whole numbers to solve problems • 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)* • Uses the commutative property of addition with rational numbers*
Computational Estimation & Estimation Strategies	**Computational Estimation & Estimation Strategies**	**Computational Estimation & Estimation Strategies**
	• Compares sets of objects and identifies which is equal	• Uses front end digits to estimate answers in addition

	to, more than, or less than the other (1 to 10 objects)* • 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)	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)
Computation: Whole Numbers, Fractions and Decimals	**Computation: Whole Numbers, Fractions and Decimals**	**Computation: Whole Numbers, Fractions and Decimals**
• 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 • 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 • 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)* • Instantly recalls basic subtraction facts with minuend less than 10* • Subtracts a 1-digit number from a multiple-digit	• 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 • 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 • Uses a number line to construct subtraction facts with subtrahends and minuends through 20 (whole numbers)* • Adds and subtracts whole numbers using place value • Subtracts a 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	• 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 • Solves real-world whole number addition problems with sums to 100 (start unknown)* • Adds and subtracts whole numbers using place value • 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) • Solves real-world whole number problems involving subtraction with numbers 100 and under (analysis) • 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

- number*
- Subtracts a 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*
- 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
- Multiplies basic facts to 10 x 10 vertically
- Multiplies a 2-digit number by a 1-digit number with regrouping
- Solves word problems involving basic whole number multiplication facts to 10 x 10
- 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)
- Instantly recalls division facts with dividend and divisors less than 10
- Recognizes addition and subtraction fact families through 18
- Demonstrates an understanding of the inverse relationship between multiplication and division
- Adds decimals to the hundredths place (same number of digits)
- Adds money with regrouping
- Subtracts decimals to the hundredths place (same number of digits) without regrouping
- Makes change to $1.00 by "counting on" or subtracting
- Computes with dollars and cents up to and including $5.00 and converts to decimals (addition/subtraction

- 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*
- 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
- 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
- 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
- Uses repeated subtraction for division*
- Models whole number multiplication and division algorithms (e.g., shows multiplication as repeated addition and division as repeated subtraction)
- 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)
- Uses models to add and subtract fractions and connect the actions to algorithms*
- Adds decimals to the hundredths place (same number of digits)
- Adds decimals to the hundredths place in vertical

- 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
- Solves word problems involving whole number multiplication with numbers greater than 10 x 10
- Models whole number multiplication and division algorithms (e.g., uses physical materials to show 4 groups of 3 objects)*
- 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*
- Recognizes multiplication and division fact families*
- Adds fractions with like denominators without reducing
- Uses models to add and subtract fractions and connect the actions to algorithms*

only) • Computes 1 operation on addition or subtraction real-world problems involving money up to $5.00	format (not same number of digits)* • Adds decimals to the thousandths place vertically with and without regrouping • Adds money with 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 • Makes change to $1.00 by "counting on" or subtracting • 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) • Multiplies a decimal by whole number • Computes half price (multiplication/division)* • Computes with dollars and cents up to and including $5.00 and converts to decimals (multiplication/division) • Computes 1 operation on real-world problems involving money over $5.00 (multiplication/division)	• 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 • Computes the value of multiple bills and coins (addition/subtraction only)* • Multiplies a decimal by whole number • Computes with dollars and cents up to and including $5.00 and converts to decimals (multiplication/division)
New Vocabulary: changed, digit, fourth, fourths, gave, left, million, odd number, one, pennies, row, smallest, symmetrical, ten thousand, third, thirds, unifix cubes	*New Vocabulary*: billion, capacity, composite number, deposit, each, hundred million, longer, prime number, quintillion, standard numeral, thousands, trillion	*New Vocabulary*: biggest, compatible numbers, expanded numeral, integer, larger, magic square, mixed number, twice
New Signs and Symbols: { } set notation, ÷ division, long division symbol	*New Signs and Symbols*: ( ) order of operations, ft feet, R remainder	*New Signs and Symbols*: > greater than, < less than, – negative number

Subject: Mathematics
Goal Strand: Number and Computation
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: Integers, Fractions, Decimals	Number Sense: Integers, Fractions, Decimals	Number Sense: Integers, Fractions, Decimals
• Writes equivalent forms of whole numbers 11 to 20 using addition (e.g., 14 = 7 + 7)* • Compares whole numbers through 999,999 • Orders whole numbers less than 1000* • Orders whole numbers less than 10,000 • Solves problems using ordinal numbers* • 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 • Matches numeric and visual representation of equivalent fractions • Compares and orders money in decimal form • Compares and orders decimals to the thousandths place (same number of digits after decimal)* • Uses rounding to estimate answers to real-world problems involving numbers less than 1000 with addition and subtraction (whole numbers only)* • Solves whole number subtraction word problems with numbers over 1000 • Solves problems using the inverse relationship between addition and subtraction* • 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 1-step problems involving multiplication or division of a whole number by a fraction*	• 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 • Solves problems using ordinal numbers* • Identifies halves of a region using nonadjacent parts • Converts a basic fractional numeral to lowest terms (e.g., halves, thirds, quarters)* • Writes mixed numbers as improper fractions and improper fractions as mixed numbers • Compares fractions (e.g., common denominator, 1 in the numerator, denominator is 2, 3, 4, 6, 8, 10) • Compares integers on a number line* • Orders integers on a number line* • Writes a terminating decimal as a fraction or mixed number • Writes a number "squared" in factored form* • Uses rounding to estimate answers to real-world problems involving numbers 1000 or greater with addition and subtraction (whole numbers only)* • Solves whole number subtraction word problems with numbers over 1000 • Uses a number line to model multiplication (whole numbers)* • 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 1-step problems involving addition and subtraction of fractions with like denominators • Finds equivalent combinations of dollars and cents with the same value*	• Writes improper fractions and mixed numbers from a visual representation* • 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 • Converts fractions to lowest terms • Writes mixed numbers as improper fractions and improper fractions as mixed 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 • Represents a decimal to the hundredths place (e.g., three hundredths = 0.03) • Writes a decimal for a shaded region to the tenths place* • Compares two integers • Orders integers on a number line* • 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 • Writes a basic percent as a fraction and vice versa (e.g., 10%, 25%, 50%, 100%)* • Expresses a percent as a fraction with 100 as the denominator and vice versa • Writes a basic percent as a decimal and vice versa* • Expresses a percent as a decimal and vice versa

• Identifies the value of a collection of coins to $1.00 (without picture of coins) • 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*	• Computes addition and subtraction on multiple-step real-world problems involving money • Computes money problems with multiple operations (addition/subtraction only) • Computes addition, subtraction, multiplication, and division on multiple-step, real-world problems involving money	• Writes a power as a product of multiplied numbers and vice versa (e.g., $2^4 = 2 \times 2 \times 2 \times 2$) • Uses powers to represent 10, 100, 1000, 10,000, and 100,000 • 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)* • 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 addition and subtraction of fractions where converting one denominator is necessary • Solves 1-step real-world problems involving fractions with multiplication and division • Computes addition and subtraction on multiple-step real-world problems involving money • Computes addition, subtraction, multiplication, and division on multiple-step, real-world problems involving money
Number Systems and Their Properties	**Number Systems and Their Properties**	**Number Systems and Their Properties**
• 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 • Writes equivalent forms of whole numbers using multiplication (e.g., 12 = 4 x 3 = 2 x 6 = 2 x 2 x 3)* • Identifies whole numbers under 100 given place value terms (e.g., 3 tens and 4 ones = 34)	• 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)* • Writes whole numbers in standard and expanded form through the hundred thousands • Applies base ten place value concepts with whole numbers to solve problems • Demonstrates an understanding of the associative property of addition*	• Identifies whole numbers 100 - 999 using 2-D and 3-D models* • Identifies whole numbers over 999 using 2- and 3-D models* • Writes whole numbers in standard and expanded form through the hundred thousands • Writes the Roman numeral equivalent of Arabic numbers 1-2000 and vice versa* • Identifies numbers as prime • 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*

• 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 • Distinguishes between odd and even numbers • Identifies numbers as composite • 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)	• 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)* • Uses the commutative property of addition with rational numbers*	• Uses the commutative property of addition with rational numbers*
Computational Estimation & Estimation Strategies	**Computational Estimation & Estimation Strategies**	**Computational Estimation & Estimation Strategies**
• Compares sets of objects and identifies which is equal to, more than, or less than the other (1 to 10 objects)* • 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)	• 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)	• 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*
Computation: Whole Numbers, Fractions and Decimals	**Computation: Whole Numbers, Fractions and Decimals**	**Computation: Whole Numbers, Fractions and Decimals**
• 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 • Solves real-world whole number addition problems with sums to 20 (result unknown) - with extraneous	• 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 • Solves real-world whole number addition problems	• Determines factors of whole numbers • Completes a factor tree for a number (prime factorization)* • Identifies common factors of two or more numbers* • Identifies the greatest common factor of whole numbers • Uses reasoning strategies to solve magic squares and related puzzles (addition, whole numbers only) • Subtracts numbers with 5 digits or more with regrouping

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
- Uses a number line to construct subtraction facts with subtrahends and minuends through 20 (whole numbers)*
- Adds and subtracts whole numbers using place value
- Subtracts a 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
- Performs mental subtraction with numbers 1000 and over
- Subtracts multiple-digit numbers with no regrouping*
- 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
- 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
- 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
- Uses repeated subtraction for division*

- with sums to 100 (start unknown)*
- Adds and subtracts whole numbers using place value
- 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)
- Solves real-world whole number problems involving subtraction with numbers 100 and under (analysis)
- 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
- Solves word problems involving whole number multiplication with numbers greater than 10 x 10
- Models whole number multiplication and division algorithms (e.g., uses physical materials to show 4 groups of 3 objects)*
- 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

- Uses strategies to determine 2 or more missing digits (addition/subtraction only)
- 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
- Models whole number multiplication and division algorithms (e.g., uses physical materials to show 4 groups of 3 objects)*
- 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*
- Demonstrates an understanding of the inverse relationship between addition and subtraction
- Recognizes multiplication and division fact families*
- Adds fractions with like denominators without reducing
- Adds mixed fractions with like denominators
- 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

- Models whole number multiplication and division algorithms (e.g., shows multiplication as repeated addition and division as repeated subtraction)
- 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)
- Uses models to add and subtract fractions and connect the actions to algorithms*
- 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
- Adds money with 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
- Makes change to $1.00 by "counting on" or subtracting
- 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)
- Multiplies a decimal by whole number
- Computes half price (multiplication/division)*
- Computes with dollars and cents up to and including $5.00 and converts to decimals (multiplication/division)
- Computes 1 operation on real-world problems involving money over $5.00 (multiplication/division)

- 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*
- Recognizes multiplication and division fact families*
- Adds fractions with like denominators without reducing
- Uses models to add and subtract fractions and connect the actions to algorithms*
- 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
- Computes the value of multiple bills and coins (addition/subtraction only)*
- Multiplies a decimal by whole number
- Computes with dollars and cents up to and including $5.00 and converts to decimals (multiplication/division)

- 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
- 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)*
- Multiplies a decimal by a decimal, vertical form (factors to tenths or hundredths)
- Multiplies a decimal by a decimal (factors to hundredths)
- Solves real-world problems involving decimals (not money) using multiplication*
- Analyzes and computes 1 operation on real-world problems involving money over $5.00 (multiplication/division)
- Computes with dollars and cents over $5.00 and converts to decimals (multiplication/division)

New Vocabulary: billion, capacity, composite number, deposit, each, hundred million, longer, prime number, quintillion, standard numeral, thousands, trillion	*New Vocabulary*: biggest, compatible numbers, expanded numeral, integer, larger, magic square, mixed number, twice	*New Vocabulary*: coin, common factor, decimal form, factor tree, greatest common factor, lowest term, proof, triple
New Signs and Symbols: ( ) order of operations, ft feet, R remainder	*New Signs and Symbols*: > greater than, < less than, – negative number	*New Signs and Symbols*: ( ) parentheses around an integer, ? a variable, $ dollar sign, ≠ not equal to, % percent

Subject: Mathematics
Goal Strand: Number and Computation
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: Integers, Fractions, Decimals	Number Sense: Integers, Fractions, Decimals	Number Sense: Integers, Fractions, Decimals
• 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 • Solves problems using ordinal numbers* • Identifies halves of a region using nonadjacent parts • Converts a basic fractional numeral to lowest terms (e.g., halves, thirds, quarters)* • Writes mixed numbers as improper fractions and improper fractions as mixed numbers • Compares fractions (e.g., common denominator, 1 in the numerator, denominator is 2, 3, 4, 6, 8, 10) • Compares integers on a number line* • Orders integers on a number line* • Writes a terminating decimal as a fraction or mixed number • Writes a number "squared" in factored form* • Uses rounding to estimate answers to real-world problems involving numbers 1000 or greater with addition and subtraction (whole numbers only)* • Solves whole number subtraction word problems with numbers over 1000 • Uses a number line to model multiplication (whole numbers)* • 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 1-step problems involving addition and subtraction of fractions with like denominators • Finds equivalent combinations of dollars and cents with the same value*	• Writes improper fractions and mixed numbers from a visual representation* • 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 • Converts fractions to lowest terms • Writes mixed numbers as improper fractions and improper fractions as mixed 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 • Represents a decimal to the hundredths place (e.g., three hundredths = 0.03) • Writes a decimal for a shaded region to the tenths place* • Compares two integers • Orders integers on a number line* • 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 • Writes a basic percent as a fraction and vice versa (e.g., 10%, 25%, 50%, 100%)* • Expresses a percent as a fraction with 100 as the denominator and vice versa • Writes a basic percent as a decimal and vice versa* • Expresses a percent as a decimal and vice versa	• Determines the relative magnitude of whole numbers* • Orders whole numbers a million or greater using < or > symbols* • Identifies a fractions in lowest terms from a region or set • Determines simple equivalent fractions using multiples • Determines equivalent fractions using multiples • Compares fractions (e.g., comparing numerators and denominators) • Orders fractions on a number line* • Writes a decimal for a shaded region to the hundredths place • 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 two integers • Orders integers • Locates rational numbers on a number line • 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 • Writes a ratio as a decimal and vice versa* • Expresses a percent as a fraction and vice versa • Writes a ratio as a percent and vice versa* • Expresses the equivalent form of a fraction, decimal, and/or percent (simple fraction)* • Writes a power as a product of multiplied numbers and vice versa (e.g., 2^4 = 2 x 2 x 2 x 2) • Uses powers of 10 to represent numbers (e.g., 8 x 10^3 = 8000) • Uses powers to represent 10, 100, 1000, 10,000, and 100,000 • Uses rounding to estimate answers to real-world

• Computes addition and subtraction on multiple-step real-world problems involving money • Computes money problems with multiple operations (addition/subtraction only) • Computes addition, subtraction, multiplication, and division on multiple-step, real-world problems involving money	• Writes a power as a product of multiplied numbers and vice versa (e.g., 2^4 = 2 x 2 x 2 x 2) • Uses powers to represent 10, 100, 1000, 10,000, and 100,000 • 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)* • 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 addition and subtraction of fractions where converting one denominator is necessary • Solves 1-step real-world problems involving fractions with multiplication and division • Computes addition and subtraction on multiple-step real-world problems involving money • Computes addition, subtraction, multiplication, and division on multiple-step, real-world problems involving money	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* • 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 problems involving addition and subtraction of fractions where converting one denominator is necessary • Solves 1-step real-world problems involving fractions with multiplication and division • Solves 2- or more step real-world problems involving fractions with multiplication and division • Solves problems involving fractions (e.g., multiple operations, conversions)* • Solves difficult real-world problems involving decimals (e.g., multiple multiplications, conversions)
Number Systems and Their Properties	**Number Systems and Their Properties**	**Number Systems and Their Properties**
• 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)* • Writes whole numbers in standard and expanded form through the hundred thousands • Applies base ten place value concepts with whole numbers to solve problems • Demonstrates an understanding of the associative property of addition*	• Identifies whole numbers 100 - 999 using 2-D and 3-D models* • Identifies whole numbers over 999 using 2- and 3-D models* • Writes whole numbers in standard and expanded form through the hundred thousands • Writes the Roman numeral equivalent of Arabic numbers 1-2000 and vice versa* • Identifies numbers as prime • 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*	• Demonstrates an understanding of the commutative property of multiplication with complex problems (e.g., parenthesis, 3 factors) • Uses the distributive property • Uses basic operations on algebraic expressions (substituting for unknowns)

• 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)* • Uses the commutative property of addition with rational numbers*	• Uses the commutative property of addition with rational numbers*	
Computational Estimation & Estimation Strategies	**Computational Estimation & Estimation Strategies**	**Computational Estimation & Estimation Strategies**
• 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)	• 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*	• Uses estimation to solve problems involving fractions and mixed numbers
Computation: Whole Numbers, Fractions and Decimals	**Computation: Whole Numbers, Fractions and Decimals**	**Computation: Whole Numbers, Fractions and Decimals**
• 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 • Solves real-world whole number addition problems with sums to 100 (start unknown)*	• Determines factors of whole numbers • Completes a factor tree for a number (prime factorization)* • Identifies common factors of two or more numbers* • Identifies the greatest common factor of whole numbers • 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	• Determines factors of whole numbers • Completes a factor tree for a number (prime factorization)* • Identifies common factors of two or more numbers* • Identifies the greatest common factor of whole numbers • Models algorithms using place value concepts (addition and subtraction with whole numbers)* • Uses multiplication strategies to explain computation (e.g., doubles, 9-patterns, decomposing, partial products)*

- Adds and subtracts whole numbers using place value
- 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)
- Solves real-world whole number problems involving subtraction with numbers 100 and under (analysis)
- 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
- Solves word problems involving whole number multiplication with numbers greater than 10 x 10
- Models whole number multiplication and division algorithms (e.g., uses physical materials to show 4 groups of 3 objects)*
- 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

- (addition/subtraction only)
- 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
- Models whole number multiplication and division algorithms (e.g., uses physical materials to show 4 groups of 3 objects)*
- 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*
- Demonstrates an understanding of the inverse relationship between addition and subtraction
- Recognizes multiplication and division fact families*
- Adds fractions with like denominators without reducing
- Adds mixed fractions with like denominators
- 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
- Subtracts decimals to the thousandths place, vertically,

- Multiplies multiple-digit numbers
- Models algorithms using place value concepts (multiplication and division with whole numbers)*
- Divides a 4-digit number by a 2-digit number
- Divides multiple-digit numbers
- Divides numbers by powers of 10*
- Adds decimals to the hundredths place in horizontal format (not same number of digits)
- Subtracts decimals to the hundredths place (not same number of digits)
- Subtracts decimals to the thousandths place, horizontally, with and without regrouping
- Subtracts a decimal from a whole number, horizontally
- Multiplies a decimal by a decimal, vertical form (factors to tenths or hundredths)
- Multiplies a decimal by a decimal (factors to hundredths)
- Multiplies a decimal by 10, 100, 1000
- Solves real-world problems involving rate of pay
- Computes with dollars and cents over $5.00 and converts to decimals (multiplication/division)
- Computes the value of multiple bills and coins (multiplication/division)

* 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.

• 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* • Recognizes multiplication and division fact families* • Adds fractions with like denominators without reducing • Uses models to add and subtract fractions and connect the actions to algorithms* • 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 • Computes the value of multiple bills and coins (addition/subtraction only)* • Multiplies a decimal by whole number • Computes with dollars and cents up to and including $5.00 and converts to decimals (multiplication/division)	with the zero missing in the ones place* • Subtracts decimals to the thousandths place, horizontally, with and without regrouping • 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)* • Multiplies a decimal by a decimal, vertical form (factors to tenths or hundredths) • Multiplies a decimal by a decimal (factors to hundredths) • Solves real-world problems involving decimals (not money) using multiplication* • Analyzes and computes 1 operation on real-world problems involving money over $5.00 (multiplication/division) • Computes with dollars and cents over $5.00 and converts to decimals (multiplication/division)	
New Vocabulary: biggest, compatible numbers, expanded numeral, integer, larger, magic square, mixed number, twice	*New Vocabulary*: coin, common factor, decimal form, factor tree, greatest common factor, lowest term, proof, triple	*New Vocabulary*: cord, net, real number, short
New Signs and Symbols: > greater than, < less than, – negative number	*New Signs and Symbols*: ( ) parentheses around an integer, ? a variable, $ dollar sign, ≠ not equal to, % percent	*New Signs and Symbols*: °C degrees Celsius, °F degrees Fahrenheit

Subject: Mathematics
Goal Strand: Number and Computation
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: Integers, Fractions, Decimals	Number Sense: Integers, Fractions, Decimals	Number Sense: Integers, Fractions, Decimals
• Writes improper fractions and mixed numbers from a visual representation* • 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 • Converts fractions to lowest terms • Writes mixed numbers as improper fractions and improper fractions as mixed 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 • Represents a decimal to the hundredths place (e.g., three hundredths = 0.03) • Writes a decimal for a shaded region to the tenths place* • Compares two integers • Orders integers on a number line* • 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 • Writes a basic percent as a fraction and vice versa (e.g., 10%, 25%, 50%, 100%)* • Expresses a percent as a fraction with 100 as the denominator and vice versa • Writes a basic percent as a decimal and vice versa* • Expresses a percent as a decimal and vice versa	• Determines the relative magnitude of whole numbers* • Orders whole numbers a million or greater using < or > symbols* • Identifies a fractions in lowest terms from a region or set • Determines simple equivalent fractions using multiples • Determines equivalent fractions using multiples • Compares fractions (e.g., comparing numerators and denominators) • Orders fractions on a number line* • Writes a decimal for a shaded region to the hundredths place • 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 two integers • Orders integers • Locates rational numbers on a number line • 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 • Writes a ratio as a decimal and vice versa* • Expresses a percent as a fraction and vice versa • Writes a ratio as a percent and vice versa* • Expresses the equivalent form of a fraction, decimal, and/or percent (simple fraction)* • Writes a power as a product of multiplied numbers and vice versa (e.g., 2^4 = 2 x 2 x 2 x 2) • Uses powers of 10 to represent numbers (e.g., 8 x 10^3 = 8000) • Uses powers to represent 10, 100, 1000, 10,000, and 100,000 • Uses rounding to estimate answers to real-world	• Compares fractions (e.g., comparing numerators and denominators) • Writes a ratio as a decimal and vice versa* • Writes a fraction as a decimal and vice versa • Writes a fraction as a mixed decimal and vice versa* • Expresses a decimal as a whole number (e.g., 1.3 thousand = ?)* • Expresses a percent as a fraction and vice versa • Writes a ratio as a percent and vice versa* • Compares and orders decimal and fractional coordinates on a number line* • Uses powers of 10 to represent numbers (e.g., 8 x 10^3 = 8000) • Solves real-world problems involving addition and subtraction of fractions where converting both denominators is necessary • Solves 2- or more step real-world problems involving fractions with multiplication and division • Solves problems involving fractions (e.g., multiple operations, conversions)* • Solves difficult real-world problems involving decimals (e.g., multiple multiplications, conversions)

• Writes a power as a product of multiplied numbers and vice versa (e.g., 2^4 = 2 x 2 x 2 x 2) • Uses powers to represent 10, 100, 1000, 10,000, and 100,000 • 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)* • 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 addition and subtraction of fractions where converting one denominator is necessary • Solves 1-step real-world problems involving fractions with multiplication and division • Computes addition and subtraction on multiple-step real-world problems involving money • Computes addition, subtraction, multiplication, and division on multiple-step, real-world problems involving money	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* • 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 problems involving addition and subtraction of fractions where converting one denominator is necessary • Solves 1-step real-world problems involving fractions with multiplication and division • Solves 2- or more step real-world problems involving fractions with multiplication and division • Solves problems involving fractions (e.g., multiple operations, conversions)* • Solves difficult real-world problems involving decimals (e.g., multiple multiplications, conversions)	
Number Systems and Their Properties	**Number Systems and Their Properties**	**Number Systems and Their Properties**
• Identifies whole numbers 100 - 999 using 2-D and 3-D models* • Identifies whole numbers over 999 using 2- and 3-D models* • Writes whole numbers in standard and expanded form through the hundred thousands • Writes the Roman numeral equivalent of Arabic numbers 1-2000 and vice versa* • Identifies numbers as prime • 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*	• Demonstrates an understanding of the commutative property of multiplication with complex problems (e.g., parenthesis, 3 factors) • Uses the distributive property • Uses basic operations on algebraic expressions (substituting for unknowns)	• Identifies the distributive property* • Uses the distributive property • Uses basic operations on algebraic expressions (substituting for unknowns) • Uses basic operations on algebraic expressions (substituting for unknown exponents)

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* 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.

KS 3.3.1

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• Uses the commutative property of addition with rational numbers*		
Computational Estimation & Estimation Strategies	**Computational Estimation & Estimation Strategies**	**Computational Estimation & Estimation Strategies**
• 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*	• Uses estimation to solve problems involving fractions and mixed numbers	• Uses estimation to solve problems involving decimals • Determines the most accurate answer (fractions only)* • Uses estimation to solve problems involving proportional reasoning (decimals only)
Computation: Whole Numbers, Fractions and Decimals	**Computation: Whole Numbers, Fractions and Decimals**	**Computation: Whole Numbers, Fractions and Decimals**
• Determines factors of whole numbers • Completes a factor tree for a number (prime factorization)* • Identifies common factors of two or more numbers* • Identifies the greatest common factor of whole numbers • 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) • 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 • Models whole number multiplication and division algorithms (e.g., uses physical materials to show 4 groups of 3 objects)* • 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	• Determines factors of whole numbers • Completes a factor tree for a number (prime factorization)* • Identifies common factors of two or more numbers* • Identifies the greatest common factor of whole numbers • Models algorithms using place value concepts (addition and subtraction with whole numbers)* • Uses multiplication strategies to explain computation (e.g., doubles, 9-patterns, decomposing, partial products)* • Multiplies multiple-digit numbers • Models algorithms using place value concepts (multiplication and division with whole numbers)* • Divides a 4-digit number by a 2-digit number • Divides multiple-digit numbers • Divides numbers by powers of 10* • Adds decimals to the hundredths place in horizontal format (not same number of digits) • Subtracts decimals to the hundredths place (not same number of digits) • Subtracts decimals to the thousandths place, horizontally, with and without regrouping • Subtracts a decimal from a whole number, horizontally • Multiplies a decimal by a decimal, vertical form (factors to tenths or hundredths) • Multiplies a decimal by a decimal (factors to hundredths) • Multiplies a decimal by 10, 100, 1000 • Solves real-world problems involving rate of pay	• Determines the prime factorization of a number • Models algorithms using place value concepts (addition and subtraction with whole numbers)* • Models algorithms using place value concepts (multiplication and division with whole numbers)* • 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) • Uses models to multiply and divide fractions and connect the actions to algorithms* • Uses models to multiply and divide fractions and mixed fractions and connect the actions to algorithms* • Subtracts a decimal from a whole number, horizontally • Multiplies a decimal by 10, 100, 1000 • Solves real-world problems involving rate of pay • Solves real-world problems involving rate of pay with time and a half*

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*
- Demonstrates an understanding of the inverse relationship between addition and subtraction
- Recognizes multiplication and division fact families*
- Adds fractions with like denominators without reducing
- Adds mixed fractions with like denominators
- 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
- 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
- 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)*
- Multiplies a decimal by a decimal, vertical form (factors to tenths or hundredths)
- Multiplies a decimal by a decimal (factors to hundredths)
- Solves real-world problems involving decimals (not money) using multiplication*
- Analyzes and computes 1 operation on real-world problems involving money over $5.00 (multiplication/division)
- Computes with dollars and cents over $5.00 and converts to decimals (multiplication/division)

- Computes with dollars and cents over $5.00 and converts to decimals (multiplication/division)
- Computes the value of multiple bills and coins (multiplication/division)

New Vocabulary: coin, common factor, decimal form, factor tree, greatest common factor, lowest term, proof, triple	*New Vocabulary*: cord, net, real number, short	*New Vocabulary*: discount, prime factor, prime factorization, time-and-a-half
New Signs and Symbols: ( ) parentheses around an integer, ? a variable, $ dollar sign, ≠ not equal to, % percent	*New Signs and Symbols*: °C degrees Celsius, °F degrees Fahrenheit	*New Signs and Symbols*: • multiplication symbol (dot), • point, segment overbar

Subject: Mathematics
Goal Strand: Number and Computation
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
Number Sense: Integers, Fractions, Decimals	Number Sense: Integers, Fractions, Decimals	Number Sense: Integers, Fractions, Decimals
• Determines the relative magnitude of whole numbers* • Orders whole numbers a million or greater using < or > symbols* • Identifies a fractions in lowest terms from a region or set • Determines simple equivalent fractions using multiples • Determines equivalent fractions using multiples • Compares fractions (e.g., comparing numerators and denominators) • Orders fractions on a number line* • Writes a decimal for a shaded region to the hundredths place • 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 two integers • Orders integers • Locates rational numbers on a number line • 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 • Writes a ratio as a decimal and vice versa* • Expresses a percent as a fraction and vice versa • Writes a ratio as a percent and vice versa* • Expresses the equivalent form of a fraction, decimal, and/or percent (simple fraction)* • Writes a power as a product of multiplied numbers and vice versa (e.g., 2^4 = 2 x 2 x 2 x 2) • Uses powers of 10 to represent numbers (e.g., 8 x 10^3 = 8000) • Uses powers to represent 10, 100, 1000, 10,000, and 100,000 • Uses rounding to estimate answers to real-world	• Compares fractions (e.g., comparing numerators and denominators) • Writes a ratio as a decimal and vice versa* • Writes a fraction as a decimal and vice versa • Writes a fraction as a mixed decimal and vice versa* • Expresses a decimal as a whole number (e.g., 1.3 thousand = ?)* • Expresses a percent as a fraction and vice versa • Writes a ratio as a percent and vice versa* • Compares and orders decimal and fractional coordinates on a number line* • Uses powers of 10 to represent numbers (e.g., 8 x 10^3 = 8000) • Solves real-world problems involving addition and subtraction of fractions where converting both denominators is necessary • Solves 2- or more step real-world problems involving fractions with multiplication and division • Solves problems involving fractions (e.g., multiple operations, conversions)* • Solves difficult real-world problems involving decimals (e.g., multiple multiplications, conversions)	• Expresses the equivalent form of a fraction, decimal, and/or percent (complex fraction)*

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* • 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 problems involving addition and subtraction of fractions where converting one denominator is necessary • Solves 1-step real-world problems involving fractions with multiplication and division • Solves 2- or more step real-world problems involving fractions with multiplication and division • Solves problems involving fractions (e.g., multiple operations, conversions)* • Solves difficult real-world problems involving decimals (e.g., multiple multiplications, conversions)		
Number Systems and Their Properties	**Number Systems and Their Properties**	**Number Systems and Their Properties**
• Demonstrates an understanding of the commutative property of multiplication with complex problems (e.g., parenthesis, 3 factors) • Uses the distributive property • Uses basic operations on algebraic expressions (substituting for unknowns)	• Identifies the distributive property* • Uses the distributive property • Uses basic operations on algebraic expressions (substituting for unknowns) • Uses basic operations on algebraic expressions (substituting for unknown exponents)	• Identifies the associative property of addition* • Evaluates expressions by substituting with rational numbers
Computational Estimation & Estimation Strategies	**Computational Estimation & Estimation Strategies**	**Computational Estimation & Estimation Strategies**
• Uses estimation to solve problems involving fractions and mixed numbers	• Uses estimation to solve problems involving decimals • Determines the most accurate answer (fractions only)* • Uses estimation to solve problems involving proportional reasoning (decimals only)	• Uses estimation to solve problems involving decimals
Computation: Whole Numbers, Fractions and Decimals	**Computation: Whole Numbers, Fractions and Decimals**	**Computation: Whole Numbers, Fractions and Decimals**
• Determines factors of whole numbers • Completes a factor tree for a number (prime factorization)* • Identifies common factors of two or more numbers*	• Determines the prime factorization of a number • Models algorithms using place value concepts (addition and subtraction with whole numbers)* • Models algorithms using place value concepts	• Determines the prime factorization of a number using powers • Identifies the least common multiple of whole numbers*

• Identifies the greatest common factor of whole numbers • Models algorithms using place value concepts (addition and subtraction with whole numbers)* • Uses multiplication strategies to explain computation (e.g., doubles, 9-patterns, decomposing, partial products)* • Multiplies multiple-digit numbers • Models algorithms using place value concepts (multiplication and division with whole numbers)* • Divides a 4-digit number by a 2-digit number • Divides multiple-digit numbers • Divides numbers by powers of 10* • Adds decimals to the hundredths place in horizontal format (not same number of digits) • Subtracts decimals to the hundredths place (not same number of digits) • Subtracts decimals to the thousandths place, horizontally, with and without regrouping • Subtracts a decimal from a whole number, horizontally • Multiplies a decimal by a decimal, vertical form (factors to tenths or hundredths) • Multiplies a decimal by a decimal (factors to hundredths) • Multiplies a decimal by 10, 100, 1000 • Solves real-world problems involving rate of pay • Computes with dollars and cents over $5.00 and converts to decimals (multiplication/division) • Computes the value of multiple bills and coins (multiplication/division)	(multiplication and division with whole numbers)* • 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) • Uses models to multiply and divide fractions and connect the actions to algorithms* • Uses models to multiply and divide fractions and mixed fractions and connect the actions to algorithms* • Subtracts a decimal from a whole number, horizontally • Multiplies a decimal by 10, 100, 1000 • Solves real-world problems involving rate of pay • Solves real-world problems involving rate of pay with time and a half*	• Identifies the greatest common factor and least common multiple of multiple whole numbers* • Evaluates expressions using the order of operations, including exponents (whole numbers only)
New Vocabulary: cord, net, real number, short	*New Vocabulary*: discount, prime factor, prime factorization, time-and-a-half	*New Vocabulary*: least common multiple
New Signs and Symbols: °C degrees Celsius, °F degrees Fahrenheit	*New Signs and Symbols*: • multiplication symbol (dot), • point, segment overbar	*New Signs and Symbols*: LCM lowest common multiple

Subject: Mathematics
Goal Strand: Number and Computation
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
Number Sense: Integers, Fractions, Decimals	**Number Sense: Integers, Fractions, Decimals**	**Number Sense: Integers, Fractions, Decimals**
• Compares fractions (e.g., comparing numerators and denominators) • Writes a ratio as a decimal and vice versa* • Writes a fraction as a decimal and vice versa • Writes a fraction as a mixed decimal and vice versa* • Expresses a decimal as a whole number (e.g., 1.3 thousand = ?)* • Expresses a percent as a fraction and vice versa • Writes a ratio as a percent and vice versa* • Compares and orders decimal and fractional coordinates on a number line* • Uses powers of 10 to represent numbers (e.g., 8×10^3 = 8000) • Solves real-world problems involving addition and subtraction of fractions where converting both denominators is necessary • Solves 2- or more step real-world problems involving fractions with multiplication and division • Solves problems involving fractions (e.g., multiple operations, conversions)* • Solves difficult real-world problems involving decimals (e.g., multiple multiplications, conversions)	• Expresses the equivalent form of a fraction, decimal, and/or percent (complex fraction)*	• Expresses a percent over 100 or under 1 as a fraction in lowest terms and vice versa*
Number Systems and Their Properties	**Number Systems and Their Properties**	**Number Systems and Their Properties**
• Identifies the distributive property* • Uses the distributive property • Uses basic operations on algebraic expressions (substituting for unknowns) • Uses basic operations on algebraic expressions (substituting for unknown exponents)	• Identifies the associative property of addition* • Evaluates expressions by substituting with rational numbers	• Identifies the commutative property of multiplication* • Evaluates expressions by substituting with rational numbers
Computational Estimation & Estimation Strategies	**Computational Estimation & Estimation Strategies**	**Computational Estimation & Estimation Strategies**
• Uses estimation to solve problems involving decimals • Determines the most accurate answer (fractions only)* • Uses estimation to solve problems involving proportional reasoning (decimals only)	• Uses estimation to solve problems involving decimals	

Computation: Whole Numbers, Fractions and Decimals	Computation: Whole Numbers, Fractions and Decimals	Computation: Whole Numbers, Fractions and Decimals
• Determines the prime factorization of a number • Models algorithms using place value concepts (addition and subtraction with whole numbers)* • Models algorithms using place value concepts (multiplication and division with whole numbers)* • 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) • Uses models to multiply and divide fractions and connect the actions to algorithms* • Uses models to multiply and divide fractions and mixed fractions and connect the actions to algorithms* • Subtracts a decimal from a whole number, horizontally • Multiplies a decimal by 10, 100, 1000 • Solves real-world problems involving rate of pay • Solves real-world problems involving rate of pay with time and a half*	• Determines the prime factorization of a number using powers • Identifies the least common multiple of whole numbers* • Identifies the greatest common factor and least common multiple of multiple whole numbers* • Evaluates expressions using the order of operations, including exponents (whole numbers only)	
New Vocabulary: discount, prime factor, prime factorization, time-and-a-half	*New Vocabulary*: least common multiple	*New Vocabulary*: none
New Signs and Symbols: • multiplication symbol (dot), • point, segment overbar	*New Signs and Symbols*: LCM lowest common multiple	*New Signs and Symbols*: none

Subject: Mathematics
Goal Strand: Number and Computation
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
Number Sense: Integers, Fractions, Decimals	**Number Sense: Integers, Fractions, Decimals**	**Number Sense: Integers, Fractions, Decimals**
• Expresses the equivalent form of a fraction, decimal, and/or percent (complex fraction)*	• Expresses a percent over 100 or under 1 as a fraction in lowest terms and vice versa*	
Number Systems and Their Properties	**Number Systems and Their Properties**	**Number Systems and Their Properties**
• Identifies the associative property of addition* • Evaluates expressions by substituting with rational numbers	• Identifies the commutative property of multiplication* • Evaluates expressions by substituting with rational numbers	
Computational Estimation & Estimation Strategies	**Computational Estimation & Estimation Strategies**	**Computational Estimation & Estimation Strategies**
• Uses estimation to solve problems involving decimals		
Computation: Whole Numbers, Fractions and Decimals	**Computation: Whole Numbers, Fractions and Decimals**	**Computation: Whole Numbers, Fractions and Decimals**
• Determines the prime factorization of a number using powers • Identifies the least common multiple of whole numbers* • Identifies the greatest common factor and least common multiple of multiple whole numbers* • Evaluates expressions using the order of operations, including exponents (whole numbers only)		• Identifies the least common multiple of numbers in their prime factored state*
New Vocabulary: least common multiple	*New Vocabulary*: none	*New Vocabulary*: none
New Signs and Symbols: LCM lowest common multiple	*New Signs and Symbols*: none	*New Signs and Symbols*: none

Subject: Mathematics
Goal Strand: Number and Computation
RIT Score Range: Above 260

Skills and Concepts to Enhance 251 - 260	Skills and Concepts to Develop Above 260
Number Sense: Integers, Fractions, Decimals	Number Sense: Integers, Fractions, Decimals
• Expresses a percent over 100 or under 1 as a fraction in lowest terms and vice versa*	
Number Systems and Their Properties	Number Systems and Their Properties
• Identifies the commutative property of multiplication* • Evaluates expressions by substituting with rational numbers	
Computational Estimation & Estimation Strategies	Computational Estimation & Estimation Strategies
Computation: Whole Numbers, Fractions and Decimals	Computation: Whole Numbers, Fractions and Decimals
	• Identifies the least common multiple of numbers in their prime factored state*
New Vocabulary: none	*New Vocabulary*: none
New Signs and Symbols: none	*New Signs and Symbols*: none

Subject: Mathematics
Goal Strand: Algebra
RIT Score Range: Below 171

Skills and Concepts to Develop Below 171	Skills and Concepts to Introduce 171 - 180
Generate and Extend Growing and Repeating Patterns	**Generate and Extend Growing and Repeating Patterns**
• Extends repeating patterns - geometric shapes • Completes a growing arithmetic pattern by naming missing members	• Extends repeating patterns - geometric shapes • Extends a growing arithmetic pattern, defined by numbers • Completes a growing arithmetic pattern by naming missing members
Variables, Equations, and Inequalities	**Variables, Equations, and Inequalities**
• Solves basic-facts open sentences - addition and subtraction	• Solves basic-facts open sentences - addition and subtraction • Solves linear equations with basic facts - 1-step addition using a letter for the variable*
Functions and Models	**Functions and Models**
	• Writes a number sentence for a simple problem solving situation* • Determines the area of irregular shapes by counting square units*
New Vocabulary: none	*New Vocabulary*: none
New Signs and Symbols: + addition, = is equal to, – subtraction, □ variable	*New Signs and Symbols*: • point

Subject: Mathematics
Goal Strand: Algebra
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
Generate and Extend Growing and Repeating Patterns	**Generate and Extend Growing and Repeating Patterns**	**Generate and Extend Growing and Repeating Patterns**
• Extends repeating patterns - geometric shapes • Completes a growing arithmetic pattern by naming missing members	• 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*
Variables, Equations, and Inequalities	**Variables, Equations, and Inequalities**	**Variables, Equations, and Inequalities**
• Solves basic-facts open sentences - addition and subtraction	• Solves basic-facts open sentences - addition and subtraction • Solves linear equations with basic facts - 1-step addition using a letter for the variable*	• 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)
Functions and Models	**Functions and Models**	**Functions and Models**
	• Writes a number sentence for a simple problem solving situation* • Determines the area of irregular shapes by counting square units*	• Draws pictures to represent whole number problems* • Uses manipulatives to represent whole number problems* • Writes a number sentence for a simple problem solving situation* • Determines the area of irregular shapes by counting square units*
New Vocabulary: none	*New Vocabulary*: none	*New Vocabulary*: none
New Signs and Symbols: + addition, = is equal to, – subtraction, □ variable	*New Signs and Symbols*: • point	*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.

KS 3.3.1

Subject: Mathematics
Goal Strand: 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
Generate and Extend Growing and Repeating Patterns	**Generate and Extend Growing and Repeating Patterns**	**Generate and Extend Growing and Repeating 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*	• 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*
Variables, Equations, and Inequalities	**Variables, Equations, and Inequalities**	**Variables, Equations, and Inequalities**
• Solves basic-facts open sentences - addition and subtraction • Solves linear equations with basic facts - 1-step addition using a letter for the variable*	• 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)	• 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 $=$ • Solves 1-step open sentences with missing addends (numbers 100 and under) • Solves simple open sentences with missing factors (numbers 100 and under)*
Functions and Models	**Functions and Models**	**Functions and Models**
• Writes a number sentence for a simple problem solving situation* • Determines the area of irregular shapes by counting square units*	• Draws pictures to represent whole number problems* • Uses manipulatives to represent whole number problems* • Writes a number sentence for a simple problem solving situation* • Determines the area of irregular shapes by counting square units*	• Draws pictures to represent whole number problems* • Translates from a diagram to an expression or equation* • Translates a 1-step problem to a symbolic expression or equation
New Vocabulary: none	*New Vocabulary*: none	*New Vocabulary*: symbol
New Signs and Symbols: • point	*New Signs and Symbols*: none	*New Signs and Symbols*: ÷ division, $>$ greater than, $\geq$ greater than or equal to, $<$ less than, $\leq$ less than or equal to, $\times$ multiplication

Subject: Mathematics
Goal Strand: 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
Generate and Extend Growing and Repeating Patterns	**Generate and Extend Growing and Repeating Patterns**	**Generate and Extend Growing and Repeating 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*	• 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
Variables, Equations, and Inequalities	**Variables, Equations, and Inequalities**	**Variables, Equations, and Inequalities**
• 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)	• 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 $=$ • Solves 1-step open sentences with missing addends (numbers 100 and under) • Solves simple open sentences with missing factors (numbers 100 and under)*	• Translates a number sentence to a real-world situation* • Translates a 2-step problem to a symbolic expression or equation • Solves simple open sentences with missing factors (numbers 100 and under)*
Functions and Models	**Functions and Models**	**Functions and Models**
• Draws pictures to represent whole number problems* • Uses manipulatives to represent whole number problems* • Writes a number sentence for a simple problem solving situation* • Determines the area of irregular shapes by counting square units*	• Draws pictures to represent whole number problems* • Translates from a diagram to an expression or equation* • Translates a 1-step problem to a symbolic expression or equation	• Draws pictures to represent whole number problems* • Uses manipulatives to represent problems* • Translates a 1-step problem to a symbolic expression or equation • Determines the area of irregular shapes with partial square units • Uses simple linear equations to represent problem situations • Describes a realistic situation using information given in a linear equation*
New Vocabulary: none	*New Vocabulary*: symbol	*New Vocabulary*: minimum
New Signs and Symbols: none	*New Signs and Symbols*: ÷ division, $>$ greater than, $\geq$ greater than or equal to, $<$ less than, $\leq$ less than or equal to, $\times$ multiplication	*New Signs and Symbols*: ( ) order of operations, cm centimeter/centimetre

Subject: Mathematics
Goal Strand: 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
Generate and Extend Growing and Repeating Patterns	**Generate and Extend Growing and Repeating Patterns**	**Generate and Extend Growing and Repeating 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
Variables, Equations, and Inequalities	**Variables, Equations, and Inequalities**	**Variables, Equations, and Inequalities**
• 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 $=$ • Solves 1-step open sentences with missing addends (numbers 100 and under) • Solves simple open sentences with missing factors (numbers 100 and under)*	• Translates a number sentence to a real-world situation* • Translates a 2-step problem to a symbolic expression or equation • Solves simple open sentences with missing factors (numbers 100 and under)*	• Translates a 2-step problem to a symbolic expression or equation • Solves problems involving equivalent fractions* • Solves 1-step problems involving proportions
Functions and Models	**Functions and Models**	**Functions and Models**
• Draws pictures to represent whole number problems* • Translates from a diagram to an expression or equation* • Translates a 1-step problem to a symbolic expression or equation	• Draws pictures to represent whole number problems* • Uses manipulatives to represent problems* • Translates a 1-step problem to a symbolic expression or equation • Determines the area of irregular shapes with partial square units • Uses simple linear equations to represent problem situations • Describes a realistic situation using information given in a linear equation*	• Uses pictures to represent problems* • Uses diagrams to represent problems • Uses systematic lists to represent problems* • Identifies an integer from a number line • Determines the area of irregular shapes with partial square units • Counts squares to determine surface area of a cube* • Uses simple linear equations to represent problem situations • Determines the rule and completes a simple function machine output*
New Vocabulary: symbol	*New Vocabulary*: minimum	*New Vocabulary*: none
New Signs and Symbols: ÷ division, > greater than, ≥	*New Signs and Symbols*: ( ) order of operations, cm	*New Signs and Symbols*: ¢ cent sign, $ dollar sign, kg

greater than or equal to, < less than, ≤ less than or equal to, × multiplication	centimeter/centimetre	kilogram, – negative number, – negative sign, ? next in sequence

Subject: Mathematics
Goal Strand: 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
Generate and Extend Growing and Repeating Patterns	**Generate and Extend Growing and Repeating Patterns**	**Generate and Extend Growing and Repeating 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
Variables, Equations, and Inequalities	**Variables, Equations, and Inequalities**	**Variables, Equations, and Inequalities**
• Translates a number sentence to a real-world situation* • Translates a 2-step problem to a symbolic expression or equation • Solves simple open sentences with missing factors (numbers 100 and under)*	• Translates a 2-step problem to a symbolic expression or equation • Solves problems involving equivalent fractions* • Solves 1-step problems involving proportions	• Translates a problem to a symbolic expression or equation (analysis)* • Solves problems involving ratios • Solves 1-step problems involving proportions • Describes and uses a variable with whole numbers, multiplication, and division in a contextual situation* • Writes equivalent forms of algebraic expressions (e.g., $(x + 3)/2 = x/2 + 3/2$)* • Solves simple one-step inequality open sentences*
Functions and Models	**Functions and Models**	**Functions and Models**
• Draws pictures to represent whole number problems* • Uses manipulatives to represent problems* • Translates a 1-step problem to a symbolic expression or equation • Determines the area of irregular shapes with partial square units • Uses simple linear equations to represent problem situations • Describes a realistic situation using information given in a linear equation*	• Uses pictures to represent problems* • Uses diagrams to represent problems • Uses systematic lists to represent problems* • Identifies an integer from a number line • Determines the area of irregular shapes with partial square units • Counts squares to determine surface area of a cube* • Uses simple linear equations to represent problem situations • Determines the rule and completes a simple function machine output*	• Uses pictures to represent problems* • Expresses a simple linear equation from a contextual situation • Describes the relationship or a real-world situation represented by a simple linear inequality (e.g., 1- or 2-step)*
New Vocabulary: minimum	*New Vocabulary*: none	*New Vocabulary*: none

New Signs and Symbols: ( ) order of operations, cm centimeter/centimetre	*New Signs and Symbols*: ¢ cent sign, $ dollar sign, kg kilogram, – negative number, – negative sign, ? next in sequence	*New Signs and Symbols*: ∶ ratio

Subject: Mathematics
Goal Strand: 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 231 - 240
Generate and Extend Growing and Repeating Patterns	**Generate and Extend Growing and Repeating Patterns**	**Generate and Extend Growing and Repeating 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	• Applies the rule to determine which number does not belong - growing pattern: arithmetic*
Variables, Equations, and Inequalities	**Variables, Equations, and Inequalities**	**Variables, Equations, and Inequalities**
• Translates a 2-step problem to a symbolic expression or equation • Solves problems involving equivalent fractions* • Solves 1-step problems involving proportions	• Translates a problem to a symbolic expression or equation (analysis)* • Solves problems involving ratios • Solves 1-step problems involving proportions • Describes and uses a variable with whole numbers, multiplication, and division in a contextual situation* • Writes equivalent forms of algebraic expressions (e.g., $(x + 3)/2 = x/2 + 3/2$)* • Solves simple one-step inequality open sentences*	• Translates a problem to a symbolic expression or equation (analysis)* • Solves problems involving equivalent fractions (analysis)* • Solves problems involving ratios • Solves multiple-step problems involving proportions • Writes equivalent forms of algebraic expressions (e.g., $(x + 3)/2 = x/2 + 3/2$)*
Functions and Models	**Functions and Models**	**Functions and Models**
• Uses pictures to represent problems* • Uses diagrams to represent problems • Uses systematic lists to represent problems* • Identifies an integer from a number line • Determines the area of irregular shapes with partial square units • Counts squares to determine surface area of a cube* • Uses simple linear equations to represent problem situations • Determines the rule and completes a simple function machine output*	• Uses pictures to represent problems* • Expresses a simple linear equation from a contextual situation • Describes the relationship or a real-world situation represented by a simple linear inequality (e.g., 1- or 2-step)*	• Uses pictures to represent problems* • Determines the area of a triangle drawn on a grid* • Expresses a simple linear equation from a contextual situation • Expresses a simple linear inequality from a contextual situation • Describes the relationship or a real-world situation represented by a simple linear inequality (e.g., 1- or 2-step)* • Represents real-world functions using an equation • Identifies the graph type, given equations of linear and nonlinear functions*

New Vocabulary: none	*New Vocabulary*: none	*New Vocabulary*: algebraic sentence, equality, is less than, representative sample
New Signs and Symbols: ¢ cent sign, $ dollar sign, kg kilogram, – negative number, – negative sign, ? next in sequence	*New Signs and Symbols*: : ratio	*New Signs and Symbols*: • multiplication symbol (dot), + positive number, = is equal to

Subject: Mathematics
Goal Strand: Algebra
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
Generate and Extend Growing and Repeating Patterns	**Generate and Extend Growing and Repeating Patterns**	**Generate and Extend Growing and Repeating Patterns**
• Extends a growing pattern of triangular numbers, defined by objects or diagrams	• Applies the rule to determine which number does not belong - growing pattern: arithmetic*	• Represents growing arithmetic patterns using algebraic expressions or equations* • Uses an algebraic expression to represent a triangular number pattern*
Variables, Equations, and Inequalities	**Variables, Equations, and Inequalities**	**Variables, Equations, and Inequalities**
• Translates a problem to a symbolic expression or equation (analysis)* • Solves problems involving ratios • Solves 1-step problems involving proportions • Describes and uses a variable with whole numbers, multiplication, and division in a contextual situation* • Writes equivalent forms of algebraic expressions (e.g., $(x + 3)/2 = x/2 + 3/2$)* • Solves simple one-step inequality open sentences*	• Translates a problem to a symbolic expression or equation (analysis)* • Solves problems involving equivalent fractions (analysis)* • Solves problems involving ratios • Solves multiple-step problems involving proportions • Writes equivalent forms of algebraic expressions (e.g., $(x + 3)/2 = x/2 + 3/2$)*	• Solves multiple-step problems involving proportions
Functions and Models	**Functions and Models**	**Functions and Models**
• Uses pictures to represent problems* • Expresses a simple linear equation from a contextual situation • Describes the relationship or a real-world situation represented by a simple linear inequality (e.g., 1- or 2-step)*	• Uses pictures to represent problems* • Determines the area of a triangle drawn on a grid* • Expresses a simple linear equation from a contextual situation • Expresses a simple linear inequality from a contextual situation • Describes the relationship or a real-world situation represented by a simple linear inequality (e.g., 1- or 2-step)* • Represents real-world functions using an equation • Identifies the graph type, given equations of linear and nonlinear functions*	• Uses algebraic representations to model and interpret mathematical and real-world situations* • Uses linear equations to represent situations involving variable quantities • Describes the relationship or a real-world situation represented by a simple linear inequality (e.g., 1- or 2-step)*
New Vocabulary: none	*New Vocabulary*: algebraic sentence, equality, is less than, representative sample	*New Vocabulary*: none
New Signs and Symbols: ∶ ratio	*New Signs and Symbols*: • multiplication symbol (dot), + positive number, = is equal to	*New Signs and Symbols*: none

Subject: Mathematics
Goal Strand: Algebra
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
Generate and Extend Growing and Repeating Patterns	**Generate and Extend Growing and Repeating Patterns**	**Generate and Extend Growing and Repeating Patterns**
• Applies the rule to determine which number does not belong - growing pattern: arithmetic*	• Represents growing arithmetic patterns using algebraic expressions or equations* • Uses an algebraic expression to represent a triangular number pattern*	
Variables, Equations, and Inequalities	**Variables, Equations, and Inequalities**	**Variables, Equations, and Inequalities**
• Translates a problem to a symbolic expression or equation (analysis)* • Solves problems involving equivalent fractions (analysis)* • Solves problems involving ratios • Solves multiple-step problems involving proportions • Writes equivalent forms of algebraic expressions (e.g., $(x + 3)/2 = x/2 + 3/2$)*	• Solves multiple-step problems involving proportions	
Functions and Models	**Functions and Models**	**Functions and Models**
• Uses pictures to represent problems* • Determines the area of a triangle drawn on a grid* • Expresses a simple linear equation from a contextual situation • Expresses a simple linear inequality from a contextual situation • Describes the relationship or a real-world situation represented by a simple linear inequality (e.g., 1- or 2-step)* • Represents real-world functions using an equation • Identifies the graph type, given equations of linear and nonlinear functions*	• Uses algebraic representations to model and interpret mathematical and real-world situations* • Uses linear equations to represent situations involving variable quantities • Describes the relationship or a real-world situation represented by a simple linear inequality (e.g., 1- or 2-step)*	• Uses algebraic representations to model and interpret mathematical and real-world situations* • Uses graphic representations to model and interpret mathematical and real-world situations*
New Vocabulary: algebraic sentence, equality, is less than, representative sample	*New Vocabulary*: none	*New Vocabulary*: none
New Signs and Symbols: • multiplication symbol (dot), + positive number, = is equal to	*New Signs and Symbols*: none	*New Signs and Symbols*: none

Subject: Mathematics
Goal Strand: Algebra
RIT Score Range: Above 250

Skills and Concepts to Enhance 241 - 250	Skills and Concepts to Develop Above 250
Generate and Extend Growing and Repeating Patterns	**Generate and Extend Growing and Repeating Patterns**
• Represents growing arithmetic patterns using algebraic expressions or equations* • Uses an algebraic expression to represent a triangular number pattern*	
Variables, Equations, and Inequalities	**Variables, Equations, and Inequalities**
• Solves multiple-step problems involving proportions	
Functions and Models	**Functions and Models**
• Uses algebraic representations to model and interpret mathematical and real-world situations* • Uses linear equations to represent situations involving variable quantities • Describes the relationship or a real-world situation represented by a simple linear inequality (e.g., 1- or 2-step)*	• Uses algebraic representations to model and interpret mathematical and real-world situations* • Uses graphic representations to model and interpret mathematical and real-world situations*
New Vocabulary: none	*New Vocabulary*: none
New Signs and Symbols: none	*New Signs and Symbols*: none

Subject: Mathematics
Goal Strand: Geometry
RIT Score Range: Below 161

Skills and Concepts to Develop Below 161	Skills and Concepts to Introduce 161 - 170
Geometric Figures and Their Properties	**Geometric Figures and Their Properties**
• 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 cone • Sorts solid figures and objects according to attributes* • Identifies figures that are the same size and shape
Measurement and Estimation in Measurement	**Measurement and Estimation in Measurement**
• Compares objects (wider, narrower)* • Compares objects (taller, shorter)*	• Compares objects (shorter, longer) • Estimates and measures length of an object to the nearest inch using a picture of a ruler* • 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
Transformational Geometry	**Transformational Geometry**
New Vocabulary: none	*New Vocabulary*: corner, flat, shortest
New Signs and Symbols: none	*New Signs and Symbols*: cm centimeter/centimetre, ft feet, • point, : used with time

Subject: Mathematics
Goal Strand: Geometry
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 Figures and Their Properties	**Geometric Figures and Their Properties**	**Geometric Figures and Their Properties**
• 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 cone • 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 • Identifies figures that are similar
Measurement and Estimation in Measurement	**Measurement and Estimation in Measurement**	**Measurement and Estimation in Measurement**
• Compares objects (wider, narrower)* • Compares objects (taller, shorter)*	• Compares objects (shorter, longer) • Estimates and measures length of an object to the nearest inch using a picture of a ruler* • 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	• Estimates and measures length of an object to the nearest centimeter using a picture of a ruler* • Measures length with customary measures to the inch mark* • Knows the approximate weight of familiar objects • 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*
Transformational Geometry	**Transformational Geometry**	**Transformational Geometry**
		• Identifies spatial sense concepts (e.g., outside, inside, between, over, under, above, below, behind, in front, middle)*
New Vocabulary: none	*New Vocabulary*: corner, flat, shortest	*New Vocabulary*: geometric figure, metric, morning, similar
New Signs and Symbols: none	*New Signs and Symbols*: cm centimeter/centimetre, ft feet, • point, : used with time	*New Signs and Symbols*: a.m., °F degrees Fahrenheit, g gram, ? next in sequence, p.m.

Subject: Mathematics
Goal Strand: Geometry
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 Figures and Their Properties	**Geometric Figures and Their Properties**	**Geometric Figures and Their 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 cone • 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 • Identifies figures that are similar	• Identifies points on a line* • 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
Measurement and Estimation in Measurement	**Measurement and Estimation in Measurement**	**Measurement and Estimation in Measurement**
• Compares objects (shorter, longer) • Estimates and measures length of an object to the nearest inch using a picture of a ruler* • 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	• Estimates and measures length of an object to the nearest centimeter using a picture of a ruler* • Measures length with customary measures to the inch mark* • Knows the approximate weight of familiar objects • 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*	• Counts and converts to dozens with models* • Converts to dozens without models • 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* • Measures length with non-standard units • Measures length with customary measures to the half-inch mark • Selects and uses the appropriate type and size of unit in customary system (weight)* • Selects and uses the appropriate type and size of unit in customary system (capacity)* • Selects and uses the appropriate type and size of unit in customary system (time)* • 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

		• Computes simple conversions among units of time (days, weeks)* • Reads Fahrenheit thermometers to the nearest degree* • Determines the perimeter of a figure where all sides are labeled
Transformational Geometry	**Transformational Geometry**	**Transformational Geometry**
	• Identifies spatial sense concepts (e.g., outside, inside, between, over, under, above, below, behind, in front, middle)*	• Identifies transformations of plane figures (rotations/turns) • Identifies transformations of plane figures (translations/slides)*
New Vocabulary: corner, flat, shortest	*New Vocabulary*: geometric figure, metric, morning, similar	*New Vocabulary*: clock, clockwise, cup, estimation, fourth, how much time, measurement, noon, rod, rotation, symmetry, ton, what time
New Signs and Symbols: cm centimeter/centimetre, ft feet, • point, ∶ used with time	*New Signs and Symbols*: a.m., °F degrees Fahrenheit, g gram, ? next in sequence, p.m.	*New Signs and Symbols*: ∶ used with time, in. inch, = is equal to

Subject: Mathematics
Goal Strand: Geometry
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 Figures and Their Properties	**Geometric Figures and Their Properties**	**Geometric Figures and Their 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 • Identifies figures that are similar	• Identifies points on a line* • 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 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 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
Measurement and Estimation in Measurement	**Measurement and Estimation in Measurement**	**Measurement and Estimation in Measurement**
• Estimates and measures length of an object to the nearest centimeter using a picture of a ruler* • Measures length with customary measures to the inch mark* • Knows the approximate weight of familiar objects • 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*	• Counts and converts to dozens with models* • Converts to dozens without models • 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* • Measures length with non-standard units • Measures length with customary measures to the half-inch mark • Selects and uses the appropriate type and size of unit in customary system (weight)* • Selects and uses the appropriate type and size of unit in	• Counts and converts to dozens with models* • Converts to dozens without models • 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* • Measures length with non-standard units • Selects and uses the appropriate type and size of unit in customary system (weight)* • Knows the approximate size of an ounce* • Uses balance scale to measure weight of an unknown object* • Selects and uses the appropriate type and size of unit in customary system (capacity)*

	customary system (capacity)* • Selects and uses the appropriate type and size of unit in customary system (time)* • 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 • Computes simple conversions among units of time (days, weeks)* • Reads Fahrenheit thermometers to the nearest degree* • Determines the perimeter of a figure where all sides are labeled	• Knows the approximate size of a pint* • Converts between cups and pints* • Converts between cups, pints, and quarts* • Selects and uses the appropriate type and size of unit in customary system (time)* • 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 • Computes simple conversions among units of time (minutes, hours) • Computes simple conversions among units of time (hours, days)* • Solves simple problems involving elapsed time, with the conversion of hours • Reads Celsius thermometers to the nearest degree • Solves problems involving measurement of temperature • Determines the perimeter of a figure where all sides are labeled • Determines the perimeter of a figure where some sides are labeled • Solves simple problems involving the perimeter of squares, rectangles, or triangles • Estimates the area of rectangles using square units
Transformational Geometry	**Transformational Geometry**	**Transformational Geometry**
• Identifies spatial sense concepts (e.g., outside, inside, between, over, under, above, below, behind, in front, middle)*	• Identifies transformations of plane figures (rotations/turns) • Identifies transformations of plane figures (translations/slides)*	• Identifies position of shapes (e.g., inside, outside, between)* • Identifies transformations of plane figures (reflections/flips)
New Vocabulary: geometric figure, metric, morning, similar	*New Vocabulary*: clock, clockwise, cup, estimation, fourth, how much time, measurement, noon, rod, rotation, symmetry, ton, what time	*New Vocabulary*: decade, face, intersect, kite, large, oval, parallel, plane, rhombus, same shape, straight, vertical line
New Signs and Symbols: a.m., °F degrees Fahrenheit, g gram, ? next in sequence, p.m.	*New Signs and Symbols*: ꞉ used with time, in. inch, = is equal to	*New Signs and Symbols*: °C degrees Celsius, $ dollar sign, " inches, m meter/metre, pt pint, qt quart, yd yard

Subject: Mathematics
Goal Strand: Geometry
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 Figures and Their Properties	**Geometric Figures and Their Properties**	**Geometric Figures and Their Properties**
• Identifies points on a line* • 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 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 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 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)*
Measurement and Estimation in Measurement	**Measurement and Estimation in Measurement**	**Measurement and Estimation in Measurement**
• Counts and converts to dozens with models* • Converts to dozens without models • 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* • Measures length with non-standard units • Measures length with customary measures to the half-inch mark • Selects and uses the appropriate type and size of unit in customary system (weight)* • Selects and uses the appropriate type and size of unit in	• Counts and converts to dozens with models* • Converts to dozens without models • 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* • Measures length with non-standard units • Selects and uses the appropriate type and size of unit in customary system (weight)* • Knows the approximate size of an ounce* • Uses balance scale to measure weight of an unknown object* • Selects and uses the appropriate type and size of unit in customary system (capacity)*	• 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 • Measures length to the nearest 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 cups and pints* • Converts between cups, pints, and quarts* • Computes simple conversions among units of time (hours, days)*

customary system (capacity)* • Selects and uses the appropriate type and size of unit in customary system (time)* • 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 • Computes simple conversions among units of time (days, weeks)* • Reads Fahrenheit thermometers to the nearest degree* • Determines the perimeter of a figure where all sides are labeled	• Knows the approximate size of a pint* • Converts between cups and pints* • Converts between cups, pints, and quarts* • Selects and uses the appropriate type and size of unit in customary system (time)* • 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 • Computes simple conversions among units of time (minutes, hours) • Computes simple conversions among units of time (hours, days)* • Solves simple problems involving elapsed time, with the conversion of hours • Reads Celsius thermometers to the nearest degree • Solves problems involving measurement of temperature • Determines the perimeter of a figure where all sides are labeled • Determines the perimeter of a figure where some sides are labeled • Solves simple problems involving the perimeter of squares, rectangles, or triangles • Estimates the area of rectangles using square units	• 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 • Knows common referents (boiling or freezing point, room temperature)* • Determines the perimeter of a figure where some sides are labeled • Estimates the area of rectangles using square units • Estimates and finds volume of a figure using cubic units • Uses basic indirect methods to estimate measurements (grids for area of irregular figures)*
Transformational Geometry	**Transformational Geometry**	**Transformational Geometry**
• Identifies transformations of plane figures (rotations/turns) • Identifies transformations of plane figures (translations/slides)*	• Identifies position of shapes (e.g., inside, outside, between)* • Identifies transformations of plane figures (reflections/flips)	
New Vocabulary: clock, clockwise, cup, estimation, fourth, how much time, measurement, noon, rod, rotation, symmetry, ton, what time	*New Vocabulary*: decade, face, intersect, kite, large, oval, parallel, plane, rhombus, same shape, straight, vertical line	*New Vocabulary*: cubic centimeter, cubic unit, decameter, decimeter, edge, hectometer, larger, milliliter, octagon, parallel line, regular polygon, trapezoid
New Signs and Symbols: ꞉ used with time, in. inch, = is equal to	*New Signs and Symbols*: °C degrees Celsius, $ dollar sign, " inches, m meter/metre, pt pint, qt quart, yd yard	*New Signs and Symbols*: ' feet, ↔ line symbol, min minute, ☐ variable

Subject: Mathematics
Goal Strand: Geometry
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 Figures and Their Properties	**Geometric Figures and Their Properties**	**Geometric Figures and Their Properties**
• Identifies lines* • Identifies parallel lines • 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 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 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)*	• Determines the diameter, given the radius, and vice versa* • Identifies rays* • Identifies perpendicular lines* • 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* • Identifies altitudes of polygons (not triangles)* • Classifies polygons by type of angle* • Classifies polygons by number of sides* • Identifies corners (vertices) of cubes* • Identifies and names a rectangular prism* • Classifies triangular prisms by their properties (e.g., base shape, lateral surface shape, vertices)* • 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* • Recognizes similar figures in the real world*
Measurement and Estimation in Measurement	**Measurement and Estimation in Measurement**	**Measurement and Estimation in Measurement**
• Counts and converts to dozens with models* • Converts to dozens without models • 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 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 • Measures length to the nearest centimeter* • Converts between inches and feet	• 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* • Measures length to the nearest half inch* • Measures length to the nearest quarter of an inch

• Measures length with non-standard units • Selects and uses the appropriate type and size of unit in customary system (weight)* • Knows the approximate size of an ounce* • Uses balance scale to measure weight of an unknown object* • 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* • Selects and uses the appropriate type and size of unit in customary system (time)* • 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 • Computes simple conversions among units of time (minutes, hours) • Computes simple conversions among units of time (hours, days)* • Solves simple problems involving elapsed time, with the conversion of hours • Reads Celsius thermometers to the nearest degree • Solves problems involving measurement of temperature • Determines the perimeter of a figure where all sides are labeled • Determines the perimeter of a figure where some sides are labeled • Solves simple problems involving the perimeter of squares, rectangles, or triangles • Estimates the area of rectangles using square units	• 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 cups and pints* • Converts between cups, pints, and quarts* • Computes simple conversions among units of time (hours, days)* • 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 • Knows common referents (boiling or freezing point, room temperature)* • Determines the perimeter of a figure where some sides are labeled • Estimates the area of rectangles using square units • Estimates and finds volume of a figure using cubic units • Uses basic indirect methods to estimate measurements (grids for area of irregular figures)*	• Measures length to the nearest eighth of an inch • Converts between inches and feet • Converts between inches, feet, and yards • Converts between feet, yards, and miles* • Apply dimensional analysis to simple real-world problems (length)* • Selects and uses the appropriate type and size of unit in metric system (mass)* • Solves simple problems involving measurement of weight* • Apply dimensional analysis to simple real-world problems (weight/mass)* • Knows the approximate size of an ounce* • Knows the approximate size of a gallon* • Converts between cups, pints, quarts, and gallons • Applies dimensional analysis to simple real-world problems (time)* • Solves difficult problems involving elapsed time, with the conversion of hours • Reads Celsius thermometers to 0.1 degrees* • Determines the perimeter of a figure using non-standard units* • Solves problems involving the perimeter of squares, rectangles, or triangles • Estimates and finds volume of a figure using cubic units • Selects and uses the appropriate units depending on degree of accuracy required to solve problems*
Transformational Geometry	**Transformational Geometry**	**Transformational Geometry**
• Identifies position of shapes (e.g., inside, outside, between)* • Identifies transformations of plane figures (reflections/flips)		• Identifies geometric transformations (rotations)* • Identifies geometric transformations (translations)* • Identifies geometric transformations (reflections)*
New Vocabulary: decade, face, intersect, kite, large, oval, parallel, plane, rhombus, same shape, straight, vertical line	*New Vocabulary*: cubic centimeter, cubic unit, decameter, decimeter, edge, hectometer, larger, milliliter, octagon, parallel line, regular polygon, trapezoid	*New Vocabulary*: acute angle, congruent angle, dilation, enlargement, geometric solid, how long, obtuse angle, straight angle, tessellation, transformation
New Signs and Symbols: °C degrees Celsius, $ dollar sign, " inches, m meter/metre, pt pint, qt quart, yd yard	*New Signs and Symbols*: ' feet, ↔ line symbol, min	*New Signs and Symbols*: ∠ angle, angle marker (arc), ⊏

	minute, ▢ variable	cup, ° degrees, fl oz fluid ounce, gal gallon, hr hour, lb pound, ↓ measurement span down, ← measurement span left, → measurement span right, ↑ measurement span up, oz ounce, ∟ right angle marker, segment overbar

Subject: Mathematics
Goal Strand: Geometry
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 Figures and Their Properties	**Geometric Figures and Their Properties**	**Geometric Figures and Their Properties**
• Identifies the intersection point of two lines* • Identifies intersecting lines • Identifies parallel lines • 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)*	• Determines the diameter, given the radius, and vice versa* • Identifies rays* • Identifies perpendicular lines* • 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* • Identifies altitudes of polygons (not triangles)* • Classifies polygons by type of angle* • Classifies polygons by number of sides* • Identifies corners (vertices) of cubes* • Identifies and names a rectangular prism* • Classifies triangular prisms by their properties (e.g., base shape, lateral surface shape, vertices)* • 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* • Recognizes similar figures in the real world*	• Determines the diameter, given the radius, and vice versa* • Identifies rays* • Determines which lines are perpendicular (analysis)* • Identifies properties of parallel and perpendicular lines • 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* • Compares polygons by properties • Identifies the number of diagonals of regular polygons* • Identifies properties of quadrilaterals* • Classifies polygons by type of angle* • Identifies the number of edges on rectangular prisms*
Measurement and Estimation in Measurement	**Measurement and Estimation in Measurement**	**Measurement and Estimation in 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 • Measures length to the nearest centimeter* • Converts between inches and feet	• 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* • Measures length to the nearest half inch* • Measures length to the nearest quarter of an inch	• Uses the appropriate unit of measure for length* • Knows the approximate size of a meter • Measures length to the nearest millimeter • Converts between inches, feet, and yards • Converts between feet, yards, and miles* • Converts between millimeters, centimeters, meters, and kilometers • Apply dimensional analysis to simple real-world

• 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 cups and pints* • Converts between cups, pints, and quarts* • Computes simple conversions among units of time (hours, days)* • 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 • Knows common referents (boiling or freezing point, room temperature)* • Determines the perimeter of a figure where some sides are labeled • Estimates the area of rectangles using square units • Estimates and finds volume of a figure using cubic units • Uses basic indirect methods to estimate measurements (grids for area of irregular figures)*	• Measures length to the nearest eighth of an inch • Converts between inches and feet • Converts between inches, feet, and yards • Converts between feet, yards, and miles* • Apply dimensional analysis to simple real-world problems (length)* • Selects and uses the appropriate type and size of unit in metric system (mass)* • Solves simple problems involving measurement of weight* • Apply dimensional analysis to simple real-world problems (weight/mass)* • Knows the approximate size of an ounce* • Knows the approximate size of a gallon* • Converts between cups, pints, quarts, and gallons • Applies dimensional analysis to simple real-world problems (time)* • Solves difficult problems involving elapsed time, with the conversion of hours • Reads Celsius thermometers to 0.1 degrees* • Determines the perimeter of a figure using non-standard units* • Solves problems involving the perimeter of squares, rectangles, or triangles • Estimates and finds volume of a figure using cubic units • Selects and uses the appropriate units depending on degree of accuracy required to solve problems*	problems (length)* • Solves problems involving length in the customary system and converts to larger or smaller units • Converts between ounces and pounds • Converts between cups, pints, quarts, and gallons • Converts within the metric system • 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 problems involving the perimeter of irregular or complex shapes • Solves problems involving perimeter and converts to larger or smaller units • Solves simple problems involving the area of a square or rectangle
Transformational Geometry	**Transformational Geometry**	**Transformational Geometry**
	• Identifies geometric transformations (rotations)* • Identifies geometric transformations (translations)* • Identifies geometric transformations (reflections)*	• Identifies geometric transformations (rotations)* • Identifies geometric transformations (translations)* • Identifies geometric transformations (reflections)*
New Vocabulary: cubic centimeter, cubic unit, decameter, decimeter, edge, hectometer, larger, milliliter, octagon, parallel line, regular polygon, trapezoid	*New Vocabulary*: acute angle, congruent angle, dilation, enlargement, geometric solid, how long, obtuse angle, straight angle, tessellation, transformation	*New Vocabulary*: arc, central angle, equilateral triangle, interior angle, isosceles triangle, obtuse triangle, scalene triangle
New Signs and Symbols: ' feet, ↔ line symbol, min minute, □ variable	*New Signs and Symbols*: ∠ angle, angle marker (arc), ⊂ cup, ° degrees, fl oz fluid ounce, gal gallon, hr hour, lb pound, ↓ measurement span down, ← measurement span left, → measurement span right, ↑ measurement span up, oz ounce, ∟ right angle marker, segment overbar	*New Signs and Symbols*: dm decimeter/decimetre, km kilometer/kilometre, mL milliliter/millilitre, mm millimeter/millimetre, π pi

Subject: Mathematics
Goal Strand: Geometry
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 Figures and Their Properties	**Geometric Figures and Their Properties**	**Geometric Figures and Their Properties**
• Determines the diameter, given the radius, and vice versa* • Identifies rays* • Identifies perpendicular lines* • 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* • Identifies altitudes of polygons (not triangles)* • Classifies polygons by type of angle* • Classifies polygons by number of sides* • Identifies corners (vertices) of cubes* • Identifies and names a rectangular prism* • Classifies triangular prisms by their properties (e.g., base shape, lateral surface shape, vertices)* • 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* • Recognizes similar figures in the real world*	• Determines the diameter, given the radius, and vice versa* • Identifies rays* • Determines which lines are perpendicular (analysis)* • Identifies properties of parallel and perpendicular lines • 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* • Compares polygons by properties • Identifies the number of diagonals of regular polygons* • Identifies properties of quadrilaterals* • Classifies polygons by type of angle* • Identifies the number of edges on rectangular prisms*	• Determines which lines are perpendicular (analysis)* • Recognizes the interior angle relationships of triangles • Classifies isosceles triangles • Classifies scalene triangles* • Identifies properties of circles • Compares polygons by properties • 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 properties of congruent triangles*
Measurement and Estimation in Measurement	**Measurement and Estimation in Measurement**	**Measurement and Estimation in 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* • Measures length to the nearest half inch* • Measures length to the nearest quarter of an inch	• Uses the appropriate unit of measure for length* • Knows the approximate size of a meter • Measures length to the nearest millimeter • Converts between inches, feet, and yards • Converts between feet, yards, and miles* • Converts between millimeters, centimeters, meters, and kilometers • Apply dimensional analysis to simple real-world	• Measures length to the nearest millimeter • Converts between feet, yards, and miles* • Converts between millimeters, centimeters, meters, and kilometers • 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*

• Measures length to the nearest eighth of an inch • Converts between inches and feet • Converts between inches, feet, and yards • Converts between feet, yards, and miles* • Apply dimensional analysis to simple real-world problems (length)* • Selects and uses the appropriate type and size of unit in metric system (mass)* • Solves simple problems involving measurement of weight* • Apply dimensional analysis to simple real-world problems (weight/mass)* • Knows the approximate size of an ounce* • Knows the approximate size of a gallon* • Converts between cups, pints, quarts, and gallons • Applies dimensional analysis to simple real-world problems (time)* • Solves difficult problems involving elapsed time, with the conversion of hours • Reads Celsius thermometers to 0.1 degrees* • Determines the perimeter of a figure using non-standard units* • Solves problems involving the perimeter of squares, rectangles, or triangles • Estimates and finds volume of a figure using cubic units • Selects and uses the appropriate units depending on degree of accuracy required to solve problems*	problems (length)* • Solves problems involving length in the customary system and converts to larger or smaller units • Converts between ounces and pounds • Converts between cups, pints, quarts, and gallons • Converts within the metric system • 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 problems involving the perimeter of irregular or complex shapes • Solves problems involving perimeter and converts to larger or smaller units • Solves simple problems involving the area of a square or rectangle	• Converts between grams and kilograms* • Solves problems involving weight in the customary system and converts to larger or smaller units • Converts within the metric system • Solves problems involving the perimeter of irregular or complex shapes • Solves perimeter problems comparing width and length • Solves simple problems involving the area of a square or rectangle • Uses basic indirect methods to estimate measurements*
Transformational Geometry	**Transformational Geometry**	**Transformational Geometry**
• 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)
New Vocabulary: acute angle, congruent angle, dilation, enlargement, geometric solid, how long, obtuse angle, straight angle, tessellation, transformation	*New Vocabulary*: arc, central angle, equilateral triangle, interior angle, isosceles triangle, obtuse triangle, scalene triangle	*New Vocabulary*: acute triangle, chord, secant, shorter, square pyramid, tangent
New Signs and Symbols: ∠ angle, angle marker (arc), ⊂ cup, ° degrees, fl oz fluid ounce, gal gallon, hr hour, lb pound, ↓ measurement span down, ← measurement span left, → measurement span right, ↑ measurement span up, oz ounce, ∟ right angle marker, segment overbar	*New Signs and Symbols*: dm decimeter/decimetre, km kilometer/kilometre, mL milliliter/millilitre, mm millimeter/millimetre, π pi	*New Signs and Symbols*: congruent segment symbol, kg kilogram

Subject: Mathematics
Goal Strand: Geometry
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 Figures and Their Properties	**Geometric Figures and Their Properties**	**Geometric Figures and Their Properties**
• Determines the diameter, given the radius, and vice versa* • Identifies rays* • Determines which lines are perpendicular (analysis)* • Identifies properties of parallel and perpendicular lines • 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* • Compares polygons by properties • Identifies the number of diagonals of regular polygons* • Identifies properties of quadrilaterals* • Classifies polygons by type of angle* • Identifies the number of edges on rectangular prisms*	• Determines which lines are perpendicular (analysis)* • Recognizes the interior angle relationships of triangles • Classifies isosceles triangles • Classifies scalene triangles* • Identifies properties of circles • Compares polygons by properties • 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 properties of congruent triangles*	• Recognizes that the sum of the measures of two sides of a triangle must be greater than the measure of the third side* • Classifies right triangles by defining properties* • Identifies and names a rhombus* • Identifies symmetry of a sphere* • Identifies properties of similar figures*
Measurement and Estimation in Measurement	**Measurement and Estimation in Measurement**	**Measurement and Estimation in Measurement**
• Uses the appropriate unit of measure for length* • Knows the approximate size of a meter • Measures length to the nearest millimeter • Converts between inches, feet, and yards • Converts between feet, yards, and miles* • Converts between millimeters, centimeters, meters, and kilometers • Apply dimensional analysis to simple real-world problems (length)* • Solves problems involving length in the customary system and converts to larger or smaller units • Converts between ounces and pounds • Converts between cups, pints, quarts, and gallons • Converts within the metric system	• Measures length to the nearest millimeter • Converts between feet, yards, and miles* • Converts between millimeters, centimeters, meters, and kilometers • 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* • Converts between grams and kilograms* • Solves problems involving weight in the customary system and converts to larger or smaller units • Converts within the metric system • Solves problems involving the perimeter of irregular or complex shapes • Solves perimeter problems comparing width and	• 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 the perimeter of squares, rectangles, or triangles (analysis) • Solves perimeter problems comparing width and length • Solves problems involving area of a rectangle and converts to larger or smaller units (customary) • Uses an indirect method to measure the height of an inaccessible object*

• 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 problems involving the perimeter of irregular or complex shapes • Solves problems involving perimeter and converts to larger or smaller units • Solves simple problems involving the area of a square or rectangle	length • Solves simple problems involving the area of a square or rectangle • Uses basic indirect methods to estimate measurements*	
Transformational Geometry	**Transformational Geometry**	**Transformational Geometry**
• Identifies geometric transformations (rotations)* • Identifies geometric transformations (translations)* • Identifies geometric transformations (reflections)*	• Identifies geometric transformations (dilations)	• Determines the new coordinates of a transformed geometric figure
New Vocabulary: arc, central angle, equilateral triangle, interior angle, isosceles triangle, obtuse triangle, scalene triangle	*New Vocabulary*: acute triangle, chord, secant, shorter, square pyramid, tangent	*New Vocabulary*: infinite, linear foot, y-axis
New Signs and Symbols: dm decimeter/decimetre, km kilometer/kilometre, mL milliliter/millilitre, mm millimeter/millimetre, π pi	*New Signs and Symbols*: congruent segment symbol, kg kilogram	*New Signs and Symbols*: – negative number

Subject: Mathematics
Goal Strand: Geometry
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
Geometric Figures and Their Properties	**Geometric Figures and Their Properties**	**Geometric Figures and Their Properties**
• Determines which lines are perpendicular (analysis)* • Recognizes the interior angle relationships of triangles • Classifies isosceles triangles • Classifies scalene triangles* • Identifies properties of circles • Compares polygons by properties • 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 properties of congruent triangles*	• Recognizes that the sum of the measures of two sides of a triangle must be greater than the measure of the third side* • Classifies right triangles by defining properties* • Identifies and names a rhombus* • Identifies symmetry of a sphere* • Identifies properties of similar figures*	• Uses reasoning to verify properties of parallel and perpendicular lines • Recognizes that the sum of the measures of two sides of a triangle must be greater than the measure of the third side* • Classifies right triangles by defining properties* • Solves problems involving properties of triangles • Identifies and names a rhombus* • Uses sums of interior/exterior angles to identify polygons • Uses number of sides to find angle measures of polygons • Classifies polygons by properties
Measurement and Estimation in Measurement	**Measurement and Estimation in Measurement**	**Measurement and Estimation in Measurement**
• Measures length to the nearest millimeter • Converts between feet, yards, and miles* • Converts between millimeters, centimeters, meters, and kilometers • 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* • Converts between grams and kilograms* • Solves problems involving weight in the customary system and converts to larger or smaller units • Converts within the metric system • Solves problems involving the perimeter of irregular or complex shapes • Solves perimeter problems comparing width and length • Solves simple problems involving the area of a square or rectangle • Uses basic indirect methods to estimate measurements*	• 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 the perimeter of squares, rectangles, or triangles (analysis) • Solves perimeter problems comparing width and length • Solves problems involving area of a rectangle and converts to larger or smaller units (customary) • Uses an indirect method to measure the height of an inaccessible object*	

* 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.

Transformational Geometry	Transformational Geometry	Transformational Geometry
• Identifies geometric transformations (dilations)	• Determines the new coordinates of a transformed geometric figure	• Determines whether a given pattern or polygon will tessellate*
New Vocabulary: acute triangle, chord, secant, shorter, square pyramid, tangent	*New Vocabulary*: infinite, linear foot, y-axis	*New Vocabulary*: exterior angle, regular hexagon
New Signs and Symbols: congruent segment symbol, kg kilogram	*New Signs and Symbols*: – negative number	*New Signs and Symbols*: ≅ is congruent to, parallel symbol, ⊥ perpendicular to, ∶ ratio, ° degrees

Subject: Mathematics
Goal Strand: Geometry
RIT Score Range: 251 - 260

Skills and Concepts to Enhance 241 - 250	Skills and Concepts to Develop 251 - 260	Skills and Concepts to Introduce 261 - 270
Geometric Figures and Their Properties	**Geometric Figures and Their Properties**	**Geometric Figures and Their Properties**
• Recognizes that the sum of the measures of two sides of a triangle must be greater than the measure of the third side* • Classifies right triangles by defining properties* • Identifies and names a rhombus* • Identifies symmetry of a sphere* • Identifies properties of similar figures*	• Uses reasoning to verify properties of parallel and perpendicular lines • Recognizes that the sum of the measures of two sides of a triangle must be greater than the measure of the third side* • Classifies right triangles by defining properties* • Solves problems involving properties of triangles • Identifies and names a rhombus* • Uses sums of interior/exterior angles to identify polygons • Uses number of sides to find angle measures of polygons • Classifies polygons by properties	• Identifies the number of diagonals of regular polygons using the formula*
Measurement and Estimation in Measurement	**Measurement and Estimation in Measurement**	**Measurement and Estimation in Measurement**
• 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 the perimeter of squares, rectangles, or triangles (analysis) • Solves perimeter problems comparing width and length • Solves problems involving area of a rectangle and converts to larger or smaller units (customary) • Uses an indirect method to measure the height of an inaccessible object*		
Transformational Geometry	**Transformational Geometry**	**Transformational Geometry**
• Determines the new coordinates of a transformed geometric figure	• Determines whether a given pattern or polygon will tessellate*	
New Vocabulary: infinite, linear foot, y-axis	*New Vocabulary*: exterior angle, regular hexagon	*New Vocabulary*: decagon
New Signs and Symbols: – negative number	*New Signs and Symbols*: ≅ is congruent to, parallel symbol, ⊥ perpendicular to, ː ratio, ° degrees	*New Signs and Symbols*: none

Subject: Mathematics
Goal Strand: Geometry
RIT Score Range: 261 - 270

Skills and Concepts to Enhance 251 - 260	Skills and Concepts to Develop 261 - 270	Skills and Concepts to Introduce Above 270
Geometric Figures and Their Properties	**Geometric Figures and Their Properties**	**Geometric Figures and Their Properties**
• Uses reasoning to verify properties of parallel and perpendicular lines • Recognizes that the sum of the measures of two sides of a triangle must be greater than the measure of the third side* • Classifies right triangles by defining properties* • Solves problems involving properties of triangles • Identifies and names a rhombus* • Uses sums of interior/exterior angles to identify polygons • Uses number of sides to find angle measures of polygons • Classifies polygons by properties	• Identifies the number of diagonals of regular polygons using the formula*	• Identifies the number of diagonals of regular polygons using the formula*
Measurement and Estimation in Measurement	**Measurement and Estimation in Measurement**	**Measurement and Estimation in Measurement**
Transformational Geometry	**Transformational Geometry**	**Transformational Geometry**
• Determines whether a given pattern or polygon will tessellate*		
New Vocabulary: exterior angle, regular hexagon	*New Vocabulary*: decagon	*New Vocabulary*: none
New Signs and Symbols: ≅ is congruent to, parallel symbol, ⊥ perpendicular to, ∶ ratio, ° degrees	*New Signs and Symbols*: none	*New Signs and Symbols*: none

Subject: Mathematics
Goal Strand: Geometry
RIT Score Range: Above 270

Skills and Concepts to Enhance 261 - 270	Skills and Concepts to Develop Above 270
Geometric Figures and Their Properties	**Geometric Figures and Their Properties**
• Identifies the number of diagonals of regular polygons using the formula*	• Identifies the number of diagonals of regular polygons using the formula*
Measurement and Estimation in Measurement	**Measurement and Estimation in Measurement**
Transformational Geometry	**Transformational Geometry**
New Vocabulary: decagon	*New Vocabulary*: none
New Signs and Symbols: none	*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
RIT Score Range: Below 181

Skills and Concepts to Develop Below 181	Skills and Concepts to Introduce 181 - 190
Probability to Draw Conclusions & Make Predictions	**Probability to Draw Conclusions & Make Predictions**
• 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*
Statistics: Displays and Interprets Data	**Statistics: Displays and Interprets Data**
• Interprets simple graphs or tables • Reads and interprets data from a pictograph* • Displays data appropriately - bar graph - scale is 1 to 1*	• Interprets simple graphs or tables • Reads and interprets data from a bar graph
New Vocabulary: none	*New Vocabulary*: lowest, most likely, most often
New Signs and Symbols: $ dollar sign, = is equal to	*New Signs and Symbols*: none

Subject: Mathematics
Goal Strand: Data
RIT Score Range: 181 - 190

Skills and Concepts to Enhance Below 181	Skills and Concepts to Develop 181 - 190	Skills and Concepts to Introduce 191 - 200
Probability to Draw Conclusions & Make Predictions	**Probability to Draw Conclusions & Make Predictions**	**Probability to Draw Conclusions & Make Predictions**
• 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*
Statistics: Displays and Interprets Data	**Statistics: Displays and Interprets Data**	**Statistics: Displays and Interprets Data**
• Interprets simple graphs or tables • Reads and interprets data from a pictograph* • Displays data appropriately - bar graph - scale is 1 to 1*	• 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*
New Vocabulary: none	*New Vocabulary*: lowest, most likely, most often	*New Vocabulary*: line graph
New Signs and Symbols: $ dollar sign, = is equal to	*New Signs and Symbols*: none	*New Signs and Symbols*: a.m., °F degrees Fahrenheit, p.m., % percent, : used with time

Subject: Mathematics
Goal Strand: Data
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
Probability to Draw Conclusions & Make Predictions	**Probability to Draw Conclusions & Make Predictions**	**Probability to Draw Conclusions & Make Predictions**
• 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
Statistics: Displays and Interprets Data	**Statistics: Displays and Interprets Data**	**Statistics: Displays and Interprets Data**
• 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* • 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*
New Vocabulary: lowest, most likely, most often	*New Vocabulary*: line graph	*New Vocabulary*: bar graph, below, chance, less likely, 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*: lb pound, min minute

Subject: Mathematics
Goal Strand: Data
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
Probability to Draw Conclusions & Make Predictions	**Probability to Draw Conclusions & Make Predictions**	**Probability to Draw Conclusions & Make Predictions**
• 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 • 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*
Statistics: Displays and Interprets Data	**Statistics: Displays and Interprets Data**	**Statistics: Displays and Interprets Data**
• 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* • 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*	• 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 Venn diagrams • Reads and interprets data in scatter plots • Reads and interprets data in line plots* • Determines the average (mean) of a simple set of data • Solves simple problems involving mean • Draws conclusions from data - charts* • Predicts from pictographs and bar graphs*
New Vocabulary: line graph	*New Vocabulary*: bar graph, below, chance, less likely, probability, random	*New Vocabulary*: combinations, fastest, fitted line, line plot, mean, number cube, positive linear relationship, scatter plot, tails
New Signs and Symbols: a.m., °F degrees Fahrenheit, p.m., % percent, ∶ used with time	*New Signs and Symbols*: lb pound, min minute	*New Signs and Symbols*: { } set notation, ¢ cent sign, d distance, mph miles per hour, t time

Subject: Mathematics
Goal Strand: Data
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
Probability to Draw Conclusions & Make Predictions	**Probability to Draw Conclusions & Make Predictions**	**Probability to Draw Conclusions & Make Predictions**
• 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 • 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 likelihood using tree diagrams* • Determines probability - must determine size of sample space • Computes probability as a fraction, given equivalent forms* • Given probability as a decimal, estimates probability as a fraction* • Identifies whether predictions are based on theoretical or experimental probability*
Statistics: Displays and Interprets Data	**Statistics: Displays and Interprets Data**	**Statistics: Displays and Interprets Data**
• Reads and interprets tables* • 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*	• 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 Venn diagrams • Reads and interprets data in scatter plots • Reads and interprets data in line plots* • Determines the average (mean) of a simple set of data • Solves simple problems involving mean • Draws conclusions from data - charts* • Predicts from pictographs and bar graphs*	• Determines the most accurate sample for a situation* • 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* • Solves simple problems involving mean • Solves problems with missing data when the mean is known • 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*
New Vocabulary: bar graph, below, chance, less likely, probability, random	*New Vocabulary*: combinations, fastest, fitted line, line plot, mean, number cube, positive linear relationship, scatter plot, tails	*New Vocabulary*: experimental probability, frequency table, median, mode, survey, theoretical probability
New Signs and Symbols: lb pound, min minute	*New Signs and Symbols*: { } set notation, ¢ cent sign, d distance, mph miles per hour, t time	*New Signs and Symbols*: cm centimeter/centimetre, in. inch, oz ounce, P( ) probability, | tally mark

Subject: Mathematics
Goal Strand: Data
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
Probability to Draw Conclusions & Make Predictions	**Probability to Draw Conclusions & Make Predictions**	**Probability to Draw Conclusions & Make Predictions**
• 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 • 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 likelihood using tree diagrams* • Determines probability - must determine size of sample space • Computes probability as a fraction, given equivalent forms* • Given probability as a decimal, estimates probability as a fraction* • Identifies whether predictions are based on theoretical or experimental probability*	• Determines certainty from a set data* • Determines probability - must determine size of sample space • Modifies sample space to change the probability of an event*
Statistics: Displays and Interprets Data	**Statistics: Displays and Interprets Data**	**Statistics: Displays and Interprets Data**
• 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 Venn diagrams • Reads and interprets data in scatter plots • Reads and interprets data in line plots* • Determines the average (mean) of a simple set of data • Solves simple problems involving mean • Draws conclusions from data - charts* • Predicts from pictographs and bar graphs*	• Determines the most accurate sample for a situation* • 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* • Solves simple problems involving mean • Solves problems with missing data when the mean is known • 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*	• Organizes data using tables* • Interprets data given in tables to solve problems • 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* • Solves problems with missing data when the mean is known • Determines the median from a complex set of data (e.g., not in order, many data points) • Determines the range of a complex set of data • Predicts from charts and tables
New Vocabulary: combinations, fastest, fitted line, line plot, mean, number cube, positive linear relationship, scatter plot, tails	*New Vocabulary*: experimental probability, frequency table, median, mode, survey, theoretical probability	*New Vocabulary*: average salary, middle, successive
New Signs and Symbols: { } set notation, ¢ cent sign, d distance, mph miles per hour, t time	*New Signs and Symbols*: cm centimeter/centimetre, in. inch, oz ounce, P( ) probability, | tally mark	*New Signs and Symbols*: $ dollar sign, °C degrees Celsius, g gram, m meter/metre, mL milliliter/millilitre, – negative

* 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.

		number, ? next in sequence

Subject: Mathematics
Goal Strand: Data
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
Probability to Draw Conclusions & Make Predictions	**Probability to Draw Conclusions & Make Predictions**	**Probability to Draw Conclusions & Make Predictions**
• Determines likelihood using tree diagrams* • Determines probability - must determine size of sample space • Computes probability as a fraction, given equivalent forms* • Given probability as a decimal, estimates probability as a fraction* • Identifies whether predictions are based on theoretical or experimental probability*	• Determines certainty from a set data* • Determines probability - must determine size of sample space • Modifies sample space to change the probability of an event*	• Determines certainty from a set data* • Determines probability using counting procedures* • Determines probability using tables
Statistics: Displays and Interprets Data	**Statistics: Displays and Interprets Data**	**Statistics: Displays and Interprets Data**
• Determines the most accurate sample for a situation* • 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* • Solves simple problems involving mean • Solves problems with missing data when the mean is known • 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*	• Organizes data using tables* • Interprets data given in tables to solve problems • 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* • Solves problems with missing data when the mean is known • Determines the median from a complex set of data (e.g., not in order, many data points) • Determines the range of a complex set of data • Predicts from charts and tables	• Reads and interprets data in tables • Reads and interprets data in stem-and-leaf plots • Determines the range of a complex set of data
New Vocabulary: experimental probability, frequency table, median, mode, survey, theoretical probability	*New Vocabulary*: average salary, middle, successive	*New Vocabulary*: mileage table, stem and leaf plot
New Signs and Symbols: cm centimeter/centimetre, in. inch, oz ounce, P( ) probability,	tally mark	*New Signs and Symbols*: $ dollar sign, °C degrees Celsius, g gram, m meter/metre, mL milliliter/millilitre, – negative number, ? next in sequence	*New Signs and Symbols*: ° degrees, E east, ft feet, NE northeast, NNE north northeast, N north, NW northwest, S south, W west

Subject: Mathematics
Goal Strand: Data
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
Probability to Draw Conclusions & Make Predictions	**Probability to Draw Conclusions & Make Predictions**	**Probability to Draw Conclusions & Make Predictions**
• Determines certainty from a set data* • Determines probability - must determine size of sample space • Modifies sample space to change the probability of an event*	• Determines certainty from a set data* • Determines probability using counting procedures* • Determines probability using tables	• Determines certainty from a set data*
Statistics: Displays and Interprets Data	**Statistics: Displays and Interprets Data**	**Statistics: Displays and Interprets Data**
• Organizes data using tables* • Interprets data given in tables to solve problems • 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* • Solves problems with missing data when the mean is known • Determines the median from a complex set of data (e.g., not in order, many data points) • Determines the range of a complex set of data • Predicts from charts and tables	• Reads and interprets data in tables • Reads and interprets data in stem-and-leaf plots • Determines the range of a complex set of data	• Uses random sampling techniques* • Displays data appropriately - circle graph - calculations necessary* • Solves complex problems involving mean*
New Vocabulary: average salary, middle, successive	*New Vocabulary*: mileage table, stem and leaf plot	*New Vocabulary*: none
New Signs and Symbols: $ dollar sign, °C degrees Celsius, g gram, m meter/metre, mL milliliter/millilitre, – negative number, ? next in sequence	*New Signs and Symbols*: ° degrees, E east, ft feet, NE northeast, NNE north northeast, N north, NW northwest, S south, W west	*New Signs and Symbols*: none

Subject: Mathematics
Goal Strand: Data
RIT Score Range: Above 250

Skills and Concepts to Enhance 241 - 250	Skills and Concepts to Develop Above 250
Probability to Draw Conclusions & Make Predictions	**Probability to Draw Conclusions & Make Predictions**
• Determines certainty from a set data* • Determines probability using counting procedures* • Determines probability using tables	• Determines certainty from a set data*
Statistics: Displays and Interprets Data	**Statistics: Displays and Interprets Data**
• Reads and interprets data in tables • Reads and interprets data in stem-and-leaf plots • Determines the range of a complex set of data	• Uses random sampling techniques* • Displays data appropriately - circle graph - calculations necessary* • Solves complex problems involving mean*
New Vocabulary: mileage table, stem and leaf plot	*New Vocabulary*: none
New Signs and Symbols: ° degrees, E east, ft feet, NE northeast, NNE north northeast, N north, NW northwest, S south, W west	*New Signs and Symbols*: none