

Skills and Concepts to Enhance (73% Probability*) 201 - 210	Skills and Concepts to Develop (50% Probability*) 211 - 220	Skills and Concepts to Introduce (27% Probability*) 221 - 230
<p>Represent and Solve Problems</p> <ul style="list-style-type: none"> • Uses rounding to estimate answers to real-world problems involving numbers 1000 or greater with addition and subtraction (whole numbers only) • Solves real-world whole number problems involving subtraction with numbers 100 and under (analysis) • Solves whole number subtraction word problems with numbers over 1000 • Solves problems using the inverse relationship between addition and subtraction • Solves word problems involving whole number multiplication with numbers greater than 10×10 • 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 • Performs mental computation with division • 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 10×10 • Determines the remainder in a real-world problem (whole numbers) • Uses division for multiple-step real-world problems (whole numbers) • Evaluates numerical expressions using grouping symbols (whole numbers only) • Solves real-world problems involving 2-step multiple operations, whole numbers only • Demonstrates an understanding of the commutative property of multiplication with simple problems • Understands equivalence and extends the concept to number sentences involving variables (e.g., $8 + 2 = \square + 2$) • Uses algebraic reasoning to solve problems involving equality relationships • Uses simple linear equations to represent problem situations • Describes a realistic situation using information given in a linear equation • Solves simple open sentences with missing factors (numbers 100 and under) • Solves 2-step open sentences with missing addends • Solves open sentences with basic-facts calculations on both sides of the sentence • Translates a 1-step problem to a symbolic expression or equation 	<p>Represent and Solve Problems</p> <ul style="list-style-type: none"> • 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) • Models whole number multiplication and division algorithms (e.g., uses physical materials to show 4 groups of 3 objects) • Performs mental computation with division • Solves whole number word problems with division over 10×10 • Solves complex word problems involving whole number division with remainder (e.g., 2-step, 2-digit divisor) • Solves real-world problems involving 2-step multiple operations, whole numbers only • Solves real-world multiple-step problems involving whole numbers • Predicts the relative size of the answer when multiplying whole numbers • Demonstrates an understanding of the inverse relationship between addition and subtraction • Demonstrates an understanding of the commutative property of multiplication with simple problems • Demonstrates an understanding of the associative property of multiplication • Demonstrates an understanding of the distributive property of multiplication by decomposing a term • Understands equivalence and extends the concept to number sentences involving variables (e.g., $8 + 2 = \square + 2$) • Uses algebraic reasoning to solve problems involving equality relationships • Uses simple linear equations to represent problem situations • Solves simple open sentences with missing factors (numbers over 100) • Solves open sentences using the distributive property • Solves open sentences with calculations on both sides of the sentence • Applies algebraic methods to solve theoretical problems • Uses pictures to represent problems • Translates a 2-step problem to a symbolic expression or equation 	<p>Represent and Solve Problems</p> <ul style="list-style-type: none"> • 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) • Models algorithms using place value concepts (multiplication and division with whole numbers) • Solves complex word problems involving whole number division with remainder (e.g., 2-step, 2-digit divisor) • Solves real-world multiple-step problems involving whole numbers • Demonstrates an understanding of multiple properties • Represents relationships of quantities in the form of an expression • Solves open sentences with calculations on both sides of the sentence • Applies algebraic methods to solve theoretical problems • Applies algebraic methods to solve real-world problems • Uses pictures to represent problems • Uses multiple number theory concepts to solve problems (e.g., factors, digits, odd/even, divisibility)

Explanatory Notes

* At the range mid-point, this is the probability students would correctly answer items measuring these concepts and skills. 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.

Skills and Concepts to Enhance (73% Probability*) 201 - 210	Skills and Concepts to Develop (50% Probability*) 211 - 220	Skills and Concepts to Introduce (27% Probability*) 221 - 230
Represent and Solve Problems <ul style="list-style-type: none"> • Translates a 2-step problem to a symbolic expression or equation • Solves problems using tables • Uses number sense strategies to solve problems (addition/subtraction only) 	Represent and Solve Problems	Represent and Solve Problems
Analyze Patterns and Relationships <ul style="list-style-type: none"> • Extends a growing arithmetic pattern, defined by objects or diagrams • Completes a simple function table based on real-life situations (e.g., the number of tricycles related to the number of wheels) • Completes a function table given a simple rule (e.g., $x + 2$) • Determines the rule and completes a simple function machine output • Predicts from simple charts and tables 	Analyze Patterns and Relationships <ul style="list-style-type: none"> • Completes a function table given a simple rule (e.g., $x + 2$) • Determines the rule given a simple real-world function table (e.g., # Dogs compared to # Legs) • Determines the rule and completes a simple function machine output • Looks for a growing pattern to solve a problem • Determines factors of whole numbers • Identifies numbers as prime 	Analyze Patterns and Relationships <ul style="list-style-type: none"> • Extends a growing pattern of triangular numbers, defined by objects or diagrams • Looks for a growing pattern to solve a problem • Determines factors of whole numbers • Uses factor and multiple concepts to solve simple problems
<i>New Vocabulary:</i> minimum, plus <i>New Signs and Symbols:</i> ¢ cent sign, = is equal to, + positive number	<i>New Vocabulary:</i> None <i>New Signs and Symbols:</i> () parenthesis around an integer, { } set notation	<i>New Vocabulary:</i> None <i>New Signs and Symbols:</i> None

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