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CORRELATION OF COLORADO MODEL CONTENT STANDARDS TO *MOVING WITH MATH® EXTENSIONS GRADE 6*

		Student Book	Skill Builders
STANDARD 1			
1.	Students develop number sense and use numbers and number relationships in problem-solving situations and communicate the reasoning used in solving these problems.		
1.1	Demonstrate meanings of integers, rational numbers, percents, exponents, square roots and pi (p) using physical materials and technology in problem solving situations.	21	11-1, 11-2, 22-1, 23-1, 29-1
1.1a	Locate commonly used positive rational numbers including terminating decimals through hundredths, fractions (halves, thirds, fourths, eighths, and tenths), mixed numbers, and percents on a number line.	35	14-1
1.1b	Using physical materials or pictures to demonstrate the meaning and equivalence of commonly used fractions and/or percents (for example, write the fractions, decimal, and percent value for the shaded portion of a partially shaded circle).	23	11-1, 12-1
1.2	Read, write, and order integers, rational numbers and common irrational numbers such as $\sqrt{2}$, $\sqrt{5}$ and p.	2, 25, 37, 38, 39	2-1, 13-1, 14-1, 22-1, 23-1, 23-2, 24-1
1.2a	Read, write, order and compare common fractions, decimals, and percents in a variety of forms.	25, 37-39	13-1, 14-1, 22-1, 23-1, 24-1
1.3	Apply number theory concepts (for example, primes, factors, multiples) to represent numbers in various ways.	24 (T.G.)	4-1
1.3a	Identify and use the concepts of factor, multiple, prime, composite, and square numbers.	24 (T.G.), 57 (T.G.)	4-1, 17-2
1.3b	Describe numbers by characteristics (divisibility, even, odd, prime, composite, square).		4-1

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1.4	Use the relationships among fractions, decimals, and percents, including the concepts of ratio and proportion in problem-solving situations.		30-1
1.4a	Demonstrate equivalence relationships among fractions, decimals and percents in problem solving situations (for example, two students out of eight is the same as 25%).	40 (T.G.)	30-1
1.5	Develop, test, and explain conjectures about properties of integers and rational numbers.	4	5-1, 5-2
1.5a	Develop, test, and explain conjectures about properties of numbers (associative, commutative, identity, distributive, multiplicative property of zero on whole and rational numbers.)	4	5-1, 5-2
1.6	Use number sense to estimate and justify the reasonableness of solutions to problems involving integers, rational numbers, and common irrational numbers such as $\sqrt{2}$, $\sqrt{5}$, and π .	3, 7, 8, 14, 21, 26	3-1, 3-2, 45-2, 49-1, 49-2, 50-1, 50-2
1.6a	Use number sense to estimate, determine, and justify the reasonableness of solutions involving whole numbers, decimals, and common fractions (only sums and differences for fractions and decimals). For example: Is $1/2 + 1/3$ closer to 0, $1/2$ or 1?	7, 8, 14, 26	3-1, 3-2, 45-2, 49-1, 49-2, 50-1, 50-2
STANDARD 2			
2.	Students use algebraic methods to explore, model, and describe patterns and functions involving numbers, shapes, data, and graphs in problem-solving situations and communicate the reasoning used in solving these problems.		
2.1	Represent, describe, and analyze patterns and relationships using tables, graphs, verbal rules, and standard algebraic notation.		44-1
2.1a	Represent, describe, and analyze geometric and numeric patterns using tables, words, symbols, concrete objects, or pictures.		44-1
2.1b	Use a variable to represent an unknown (letter, box, symbol).		5-2, 45-5
2.2	Describe patterns using variables, expressions, equations and inequalities in problem-solving situations.		
2.2a	Solve problems by representing and analyzing patterns using tables, words, concrete objects, or pictures.	23, 61	47-2

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2.3	Analyze functional relationships to explain how a change in one quantity results in a change in another (for example, how the area of a circle changes as the radius increases, or how a person's height changes over time).	60 (T.G.), 61	
2.3a	Predict and describe how a change in one quantity results in a change in another quantity in a linear relationship (for example, A creature gains 3 oz. a day, how much will it have gained over 10 days?)	61	
2.4	Distinguish between linear and nonlinear functions through informal investigations.		
2.4a	Explain whether data presented in a chart or graph is changing at a constant rate.		
2.5	Solve simple linear equations in problem-solving situations using a variety of methods (informal, formal, graphical) and a variety of tools (physical materials, calculators, computers).	41, 48	19-1, 19-2, 45-5
2.5a	Solve problems using tables, concrete objects, or pictures involving linear relationships with whole numbers.	41, 61	42-1, 47-1
STANDARD 3			
3.	Students use data collection and analysis, statistics, and probability in problem-solving situations and communicate the reasoning used in solving these problems.		
3.1	Read and construct displays of data using appropriate techniques (for example, line graphs, circle graphs, scatter plots, box plots, stem-and-leaf plots) and appropriate technology.	62, 63	48-1
3.1a	Organize and construct a line graph, bar graph, and frequency table from a given set of data.	63 (T.G.)	
3.1b	Read, interpret and draw conclusions from a line graph, bar graph, circle graph and frequency table.	62, 63	48-1
3.2	Display and use measures of central tendency, such as mean, median, and mode, and measures of variability, such as range and quartiles.	18, 19	46-1, 46-2
3.2a	Find and use measures of central tendency including mean, median, and mode.	18, 19	46-1, 46-2
3.2b	Find and use the range from a given set of data (for example, find the range from 2 to 12. Note: the range is 10).	19	

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3.4	Formulate hypotheses, draw conclusions, and make convincing arguments based on data analysis.	14, 19	47-1
3.4a	Analyze data and draw conclusions to predict outcomes based on data displays such as line graphs, bar graphs, or frequency tables.	62, 63	48-1
3.6	Make predictions and compare results using both experimental and theoretical probability drawn from real-world problems.		47-2
3.6a	Using a chance device, such as a number cube or spinner, design a fair game and an unfair game, and explain why they are fair and unfair respectively.		
3.6b	Make predictions based on data obtained from simple probability experiments.		47-2
3.6c	Describe an event as likely or unlikely and explain the degree of likelihood using words such as certain, very likely, not likely, or impossible.		47-2
3.7	Use counting strategies to determine all the possible outcomes from an experiment (for example, the number of ways students can line up to have their picture taken).		
3.7a	Determine the number of possible outcomes for simple events using a variety of methods such as: organized lists or tree diagrams.		
STANDARD 4			
4.	Students use geometric concepts, properties, and relationships in problem-solving situations and communicate the reasoning used in solving these problems.		
4.2	Describe, analyze, and reason informally about the properties (for example, parallelism, perpendicularity, congruence) of two- and three dimensional figures.	50, 52-54	31-1, 32-1, 33-1, 34-1, 35-1, 39-2
4.2a	Identify, compare, and analyze the attributes of two- and three-dimensional shapes and develop vocabulary to describe the attributes (for example, acute, obtuse, right angle, parallel lines, perpendicular lines, intersecting lines, and line segments).	50, 52-54	32-1, 33-1, 34-1, 35-1, 39-2
4.2b	Make and test conjectures about geometric relationships and develop logical arguments to justify conclusions.	50	34-1, 35-1
4.4	Solve problems using coordinate geometry.	61	

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4.4a	Plot points on a coordinate graph in quadrant 1.	61	
4.4b	Draw a graph (in quadrant) from a given scenario or table.	61	
4.5	Solve problems involving perimeter and area in two dimensions, and involving surface area and volume in three dimensions.	56-58	38-1, 38-2, 39-1
4.5a	Solve problems involving the perimeter of polygons.	56	38-1
4.5b	Solve problems involving area of polygons (square, rectangle, parallelogram, rhombus, triangle).	57	38-2
4.6	Transform geometric figures using reflections, translations, and rotations to explore congruence.	53 (T.G.)	
4.6a	identify congruent shapes using reflections, rotations, and translations.		
4.6b	Show lines of symmetry on a two-dimensional figure.		
5.	Students use a variety of tools and techniques to measure, apply the results in problem-solving situations, and communicate the reasoning used in solving these problems.		
5.1	Estimate, use, and describe measures of distance, perimeter, area, volume, capacity, weight, mass, and angle comparison.	55, 60	36-1, 36-2, 37-1, 41-1, 42-1
5.1a	Determine the appropriate unit of measure, metric and US customary, when estimating distance, capacity, and weight.	55, 60	36-1, 41-1, 42-1
5.1b	Estimate and use standard and/or metric units for length, weight and temperature.	55, 60	36-1, 36-2, 41-1
5.1c	Estimate the area of a polygon.		
5.2	Estimate, make, and use direct and indirect measurements to describe and make comparisons.	55, 60	36-1, 36-2, 37-1, 41-1, 42-1
5.2a	Estimate, make and use direct and indirect measurements to describe and make comparisons.	55, 60	36-1, 36-2, 37-1, 41-1, 42-1
5.3	Read and interpret various scales including those based on number lines, graphs, and maps.	35, 62, 63	14-1, 48-1
5.3a	Read and interpret scales on number lines, graphs, and maps.	35, 62, 63	14-1, 48-1

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5.3b	Select the appropriate scale for a given problem (for example, using the appropriate scale when setting up a graph or determining the order of numbers on a number line).	63 (T.G.)	
5.4	Develop and use formulas and procedures to solve problems involving measurement.	56, 57	38-1, 38-2
5.4a	Use formulas and/or procedures to solve problems involving the perimeter of a polygon.	56	38-1
5.4b	Use formulas and/or procedures to solve problems involving the area of squares, rectangles, parallelograms, rhombus, and triangles.	57	38-2
5.5	Describe how a change in an object's linear dimensions affects its perimeter, area, and volume.	57 (T.G.)	
5.5a	Demonstrate how changing one of the dimensions of a rectangle or triangle affects its perimeter and area using concrete materials or graph paper.		
6.	Students link concepts and procedures as they develop and use computational techniques, including estimation, mental arithmetic, paper-and-pencil, calculators, and computers, in problem-solving situations and communicate the reasoning used in solving these.		
6.1	Use models to explain how ratios, proportions, and percents can be used to solve real-world problems.		29-1
6.1a	Use concrete materials or pictures to determine commonly used percentages (for example, 25%, 50%) in problem-solving situations.		29-1
6.2	Construct, use, and explain procedures to compute and estimate with whole numbers, fractions, decimals, and integers.	3, 7, 8, 14, 15, 21, 26	3-1, 3-2, 49-1, 49-2, 50-1, 50-2
6.2a	Demonstrate conceptual meaning for addition and subtraction of fractions and decimals, in problem-solving situations.	27, 28, 29, 41, 42	15-1, 16-1, 16-2, 26-1
6.2b	Use and explain strategies to add/subtract, decimals and fractions in problem-solving situations (common fractions with like and unlike denominators, mixed numbers, and decimals to thousandth).	27-29, 41, 42	15-1, 16-1, 16-2, 18-1, 26-1
6.2c	Find equivalent representations by decomposing and composing whole numbers [for example, $48 \times 12 = (48 \times 10) + (48 \times 2)$].		

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6.2d	Demonstrate proficiency with the four basic operations using whole numbers.	5-13	6-1, 7-1, 8-1, 9-1
6.3	Develop, apply, and explain a variety of different estimation strategies in problem-solving situations, and explain why an estimate may be acceptable in place of an exact answer.	3, 7, 8, 14, 15, 21, 26	3-2, 45-2
6.3a	Develop, apply and explain a variety of different estimation strategies in problem solving situations and explain why an estimate may be acceptable in place of an exact answer.	3, 7, 8, 14, 15, 21, 26	3-2, 45-2
6.4	Select and use appropriate methods for computing with commonly used fractions and decimals, percents, and integers in problem solving situations from among mental arithmetic, estimation, paper-and-pencil, calculator and computer methods	26-34, 41-47	15-1, 16-1, 16-2, 17-1, 17-2, 18-1, 19-1, 19-2, 27-1
6.4a	Apply appropriate computation methods to solve problems involving whole numbers, common fractions, and decimals (use only addition and subtraction of fractions and decimals).	26-34, 41-47	45-1 to 45-5
6.4b	In a problem solving situation, determine whether the results are reasonable and justify those results with accurate computation.	16, 17, 21	45-2