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CORRELATION OF COLORADO MODEL CONTENT STANDARDS TO
MOVING WITH MATH® EXTENSIONS GRADE 7

		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 for integers, rational numbers, percents, exponents, square roots, and pi (p) using physical materials and technology in problem solving situations.	6, 20, 23, 35	4-1, 4-2, 6-1, 6-2, 18-1, 48-1, 48-2
1.1a	Recognize and use equivalent representations of positive rational numbers.	24, 38	20-1, 25-1, 25-2
1.1b	Use models to represent integers.	20, 22	50-1
1.1c	Use exponents to indicate how many times a base is used as a factor for positive integers.		6-2
1.2	Read, write, and order integers, rational numbers and common irrational numbers such as v2, v5, and p.	1, 2, 20, 23, 25, 35	4-1, 4-2, 11-4, 18-1, 48-1 48-2
1.2a	Read, write, order and compare positive rational numbers and integers.	20, 23, 25	4-1, 4-2, 11-4, 18-1, 48-1, 48-2
1.2b	Locate positive rational numbers and integers on a number line.	23	48-2
1.3	Apply number theory concepts (for example, primes, factors, multiples) to represent numbers in various ways.	4, 27	3-1, 6-2, 26-2
1.3a	Describe numbers by their characteristics (for example, even, odd, prime, composite, divisibility, square).	4, 6	3-1, 6-1
1.4	Use the relationships among fractions, decimals, and percents, including the concepts of ratio and proportion, in problem-solving situations.	37, 38, 47, 48, 51, 52	25-1, 28-1, 46-1
1.4a	Use the relationships among fractions, decimals and percents including the concepts of ratio and proportion in problem solving situations.	37, 38, 47, 48, 51, 52	25-1, 28-1, 46-1

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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 v2, v5, and p.	3, 12, 34, 36	22-2, 44-2
1.6a	Estimate, solve and justify the reasonableness of solutions to problems involving positive rational numbers or integers.	13, 14, 34	22-2, 44-2
	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.	16, 19, 24, 44	42-1
2.1a	Represent, describe, and analyze numeric or geometric patterns involving common positive rational numbers or integers using tables, graphs, rules, or symbols.	16, 19	42-1
2.2	Describe patterns using variables, expressions, equations and inequalities in problem-solving situations.	16, 44	42-1
2.2a	Solve problems by representing and analyzing patterns involving positive rational numbers or integers using tables, graphs, or rules.	44	
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).	16	
2.3a	Predict and describe how a change in one quantity results in a change in another quantity in a linear relationship.	16	
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).	19, 21, 22	43-5, 50-1
2.5a	Solve simple linear equations in problems solving situations using a variety of methods (informal, formal, or graphic).	19, 21, 22	50-1

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2.5b	Translate written words to algebraic expressions/equations and conversely, algebraic expressions/equations to words.	15	50-1
	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.	78-80	47-2, 47-3
3.1a	Construct a histogram or stem and leaf from a set of given data.		
3.1b	Read, interpret and draw conclusions from histograms, circle graphs, stem and leaf plots, and scatter plots.	80	47-3
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	45-1, 45-2, 47-2
3.2a	Given a display of data (for example, line plot, stem and leaf plot, list of data), determine the mean, mode, median and range.	17, 18	45-2, 47-2
3.3	Evaluate arguments that are based on statistical claims.		47-2
3.3a	Evaluate arguments that are based on measures of central tendency or data displays.		47-2
3.4	Formulate hypotheses, draw conclusions, and make convincing arguments based on data analysis.	17, 78-80	47-2
3.4a	Analyze data and draw conclusions to predict outcomes based on data displays such as histograms and stem and leaf plots.	79	
3.6	Make predictions and compare results using both experimental and theoretical probability drawn from real-world problems.	77	47-1
3.6a	Report the probability of an event in fraction, decimal and percent form.	77	47-1
3.6b	Determine the probability of simple independent events (for example, tossing a coin and rolling a die).	77	47-1
3.6c	Make predictions based on theoretical probability.	77	

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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).		47-4
3.7a	Determine the number of possible outcomes for a given event using a variety of strategies, such as: tree diagrams, or organized lists.		47-4
	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.	54-59, 61	29-1, 29-2, 30-1, 31-1, 33-1
4.2a	Describe, analyze and reason informally about the attributes of two- and three-dimensional shapes (for example, angles, sides, edges, faces, vertices).	54-59, 61	29-1, 29-2, 30-1, 31-1, 33-1
4.3	Apply the concepts of ratio, proportion, and similarity in problem-solving situations.	49-51	46-1, 46-2
4.3a	Identify and compare similar shapes using ratio, proportion, or scale factor.		
4.4	Solve problems using coordinate geometry.	19	49-1
4.4a	Construct a coordinate graph and plot ordered integer pairs in all four quadrants.	19 (T.G.)	
4.5	Solve problems involving perimeter and area in two dimensions, and involving surface area and volume in three dimensions.	66, 69-76	38-1, 38-2, 39-1, 40-1, 40-2, 41-1
4.5a	Solve problems involving the circumference of a circle (formulas not provided).	71	39-1
4.5b	Solve problems involving the areas of circles, triangles, and parallelograms (formulas not provided).		
4.5c	Solve problems involving the surface area of rectangular prisms (formulas not provided).		
4.6	Transform geometric figures using reflections, translations, and rotations to explore congruence.	60	32-1
4.6a	Use reflections, translations, and/or rotations, to determine congruence between figures.		

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	STANDARD 5			
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.		56, 63, 64, 66	30-2, 34-2, 36-1, 38-1, 40-1, 41-1
5.1a	Estimate the area of irregular shapes, angle measurements, or weight of common objects.		56, 66	30-2, 40-1
5.2	Estimate, make, and use direct and indirect measurements to describe and make comparisons.		63, 64, 66	30-2, 34-2, 36-1, 38-1, 40-1
5.2a	Estimate, make and use direct and indirect measurements to describe and make comparisons.		63, 64, 66	30-2, 34-2, 36-1, 38-1, 40-1
5.3	Read and interpret various scales including those based on number lines, graphs, and maps.		23, 78, 79	46-2, 47-3
5.3a	Read and interpret scales on number lines, graphs and maps (for example, given a map and a scale, determine the distance between two point on the map).		23, 78, 79	46-2, 47-3
5.3b	Select the appropriate scale for a given problem (for example, using the appropriate scale when setting up a graph or intervals on a histogram).			47-2
5.4	Develop and use formulas and procedures to solve problems involving measurement.		70, 72, 74, 76	38-2, 39-1, 40-2, 41-1
5.4a	Develop and use procedures or formulas to solve problems involving area of polygons (for example, trapezoids, regular hexagons, regular octagons).		74	40-2
5.5	Describe how a change in an object's linear dimensions affects its perimeter, area, and volume.		69 (T.G.)	40-2
5.5a	Describe how a change in an object's linear dimensions affects its perimeter and area (for example, how a change in the radius or diameter will affect the circumference and area of a circle).			40-2
5.6	Select and use appropriate units and tools to measure to the degree of accuracy required in a particular problem-solving situation.		63, 64	34-2

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5.6a	Select and use appropriate units and tools to measure to the degree of accuracy required in a particular problem-solving situation (for example, reconstruct a replica of a given figure).	63, 64	34-2
	STANDARD 6		
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 problems.**		
6.1	Use models to explain how ratios, proportions, and percents can be used to solve real-world problems.	49-51	46-1, 46-2
6.1a	Use concrete materials or pictures to explain how ratios, proportion, and percents can be used to solve real world problems.	49-51	46-1, 46-2
6.2	Construct, use, and explain procedures to compute and estimate with whole numbers, fractions, decimals, and integers.	3, 12, 34, 36	5-1, 7-1, 8-1, 12-1, 14-1, 19-1, 19-2, 22-2, 23-1, 44-1
6.2a	Apply order of operations (including exponents with positive rational numbers).		
6.2b	Add, subtract, multiply, and divide positive rational numbers or integers.	7-10	12-1 to 12-3, 13-1 to 13-3, 14-1, 14-2, 15-1, 16-1, 16-2
6.2c	Explain strategies to add, subtract and multiply positive rational numbers.	7-10	12-1, 12-3, 13-1, 14-1
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, 12, 34, 36	5-1, 19-1, 19-2, 22-2, 44-1
6.3a	Explain why an estimate may be acceptable in place of an exact answer.	34	5-1
6.3b	solve problems using estimation and justify choice of techniques.	34	22-2, 43-1
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, and determining whether the results are reasonable.	28, 30, 31(T.G.), 39, 40, 52	43-1, 43-4

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6.4a	Determine what information is necessary or missing in a problem solving situation.	13	43-2, 43-4
6.4b	Solve problems involving positive rational numbers and/or integers.	13, 15	43-5, 43-6
6.4c	Create a situation that matches a given number sentence involving positive rational numbers or integers, excluding division of fractions and decimals.		
6.4d	Justify the reasonableness of a solution in a problem solving situation.	13, 14	22-2, 43-1