



# Math Teachers Press, Inc.

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## CORRELATION OF COLORADO MODEL CONTENT STANDARDS TO MOVING WITH MATH® INTERMEDIATE/MIDDLE (IM) GRADE 6

		<b>IM1</b> <i>Number, Reasoning &amp; Data</i> Student Book Skill Builders (SB)	<b>IM2</b> <i>Fractions, Decimals &amp; Percent</i> Student Book Skill Builders (SB)	<b>IM3</b> <i>Geometry, Measurement &amp; Graphing</i> Student Book Skill Builders (SB)
<b>STANDARD 1</b>				
<b>1.</b>	<b>Students develop number sense and use numbers and number relationships in problem-solving situations and communicate the reasoning used in solving these problems.</b>			
<b>1.1</b>	Demonstrate meanings of integers, rational numbers, percents, exponents, square roots and pi (p) using physical materials and technology in problem solving situations.	16, 17, 63-65 <b>SB:</b> 4-4, 59-1	2, 3, 67 <b>SB:</b> 4-1, 11-4, 11-6, 29-1	14
<b>1.1a</b>	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.		5, 43 <b>SB:</b> 11-4, 21-2, 23-2	
<b>1.1b</b>	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).		42, 67 <b>SB:</b> 25-4, 29-2	
<b>1.2</b>	Read and write and order integers, rational numbers and common irrational numbers.	66 <b>SB:</b> 59-3		

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<b>1.2a</b>	Read, write, order and compare common fractions, decimals, and percents in a variety of forms.		10, 11, 46, 49, 51, 67 <b>SB:</b> 13-1, 13-2, 21-2, 24-1, 24-2	
<b>1.3</b>	Apply number theory concepts (for example, primes, factors, multiples) to represent numbers in various ways.	14, 18 <b>SB:</b> 4-2, 4-5, 4-6		
<b>1.3a</b>	Identify and use the concepts of factor, multiple, prime, composite, and square numbers.	13-15, 18 <b>SB:</b> 4-1, 4-2, 4-5, 4-6	8, 18, 48 <b>SB:</b> 4-2, 4-3, 12-2	
<b>1.3b</b>	Describe numbers by characteristics (divisibility, even, odd, prime, composite, square)	14, 15 <b>SB:</b> 4-1, 4-2		
<b>1.4</b>	Use the relationships among fractions, decimals, and percents, including the concepts of ratio and proportion, in problem-solving situations.		47, 68 <b>SB:</b> 21-3, 30-3	56-59 <b>SB:</b> 52-2, 52-3, 53-1
<b>1.4a</b>	Demonstrate equivalence relationships among fractions, decimals and percents in problem solving situations (for example, two students out of eight is the same as 25%).		42, 44, 67 <b>SB:</b> 29-2	<b>SB:</b> 29-1
<b>1.5</b>	Develop, test, and explain conjectures about properties of integers and rational numbers.	63-66 <b>SB:</b> 59-1 to 59-4		
<b>1.5a</b>	Develop, test, and explain conjectures about properties of numbers (associative, commutative, identity, distributive, multiplicative property of zero on whole and rational numbers).	19-21 <b>SB:</b> 5-1, 5-2, 5-3, 5-5		

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<b>1.6</b>	Use number sense to estimate and justify the reasonableness of solutions to problems involving integers, rational numbers, and common irrational numbers.	27-30, 51-54 <b>SB:</b> 45-8, 49-1, 49-2, 50-1, 50-2, 50-3	24-27, 56, 65, 66 <b>SB:</b> 18-3, 18-4, 45-3, 45-5, 45-6, 45-9 to 45-11, 49-1, 50-1	<b>SB:</b> 49-1, 50-1
<b>1.6a</b>	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?	27-30, 51-54 <b>SB:</b> 45-8, 49-1, 49-2	24-27, 56, 65, 66 <b>SB:</b> 18-3, 18-4, 45-3, 45-5, 45-6, 45-9 to 45-11, 49-1, 50-1	<b>SB:</b> 49-1, 50-1
	<b>STANDARD 2</b>			
<b>2.</b>	<b>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.</b>			
<b>2.1</b>	Represent, describe, and analyze patterns and relationships using tables, graphs, verbal rules, and standard algebraic notation.	38, 73-76 <b>SB:</b> 44-1, 44-2, 44-3, 44-6	63 <b>SB:</b> 44-1	21, 22, 66-76 <b>SB:</b> 44-3 to 44-6
<b>2.1a</b>	Represent, describe, and analyze geometric and numeric patterns using tables, words, symbols, concrete objects, or pictures.	73-75 <b>SB:</b> 44-2, 44-3, 44-6		21, 22 <b>SB:</b> 44-1 to 44-6
<b>2.1b</b>	Use a variable to represent an unknown (letter, box, symbol)	70 <b>SB:</b> 56-4	<b>SB:</b> 56-1	
<b>2.2</b>	Describe patterns using variables, expressions, equations, and inequalities in problem-solving situations.	73-75 <b>SB:</b> 44-2, 44-3		<b>SB:</b> 44-4 to 44-6
<b>2.2a</b>	Solve problems by representing and analyzing patterns using tables, words, concrete objects, or pictures.	73-75 <b>SB:</b> 44-2, 44-3, 44-4	<b>SB:</b> 44-1	21, 22 <b>SB:</b> 44-4 to 44-6

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<b>2.3</b>	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).	76, 78 <b>SB:</b> 44-5		74 <b>SB:</b> 44-5
<b>2.3a</b>	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?)	76 <b>SB:</b> 44-5		74 <b>SB:</b> 44-5
<b>2.4</b>	Distinguish between linear and nonlinear functions through informal investigations.			
<b>2.4a</b>	Explain whether data presented in a chart or graph is changing at a constant rate.			
<b>2.5</b>	Solve simple linear equations in problem-solving situations using a variety of methods (informal, formal, and graphical) and a variety of tools (physical materials, calculators, and computers).	71, 72 <b>SB:</b> 56-2, 56-3		46-48 <b>SB:</b> 38-3, 38-6, 38-7, 38-10, 38-12, 56-2
<b>2.5a</b>	Solve problems using tables, concrete objects, or pictures involving linear relationships with whole numbers.	76, 78 <b>SB:</b> 44-4, 44-5		<b>SB:</b> 44-5
<b>STANDARD 3</b>				
<b>3.</b>	<b>Students use data collection and analysis, statistics, and probability in problem-solving situations and communicate the reasoning used in solving these problems.</b>			

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<b>3.1</b>	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.		<b>SB:</b> 48-1, 48-2, 48-3	66-76 <b>SB:</b> 47-1 to 47-6, 48-1 to 48-5
<b>3.1a</b>	Organize and construct a line graph, bar graph and frequency table from a given set of data.			69 (T.G.), 71-72 (T.G.) <b>SB:</b> 47-2, 47-5, 48-2
<b>3.1b</b>	Read, interpret and draw conclusions from a line graph, bar graph, circle graph and frequency table.		37, 38	69-73 <b>SB:</b> 47-6, 48-1, 48-3
<b>3.2</b>	Display and use measures of central tendency, such as mean, median and mode and measures of variability, such as range and quartiles.	59-62 <b>SB:</b> 46-1 to 46-5	<b>SB:</b> 46-1	<b>SB:</b> 46-1
<b>3.2a</b>	Find and use measures of central tendency including mean, median, and mode.	59-62 <b>SB:</b> 46-1 to 46-5		
<b>3.2b</b>	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).	60, 62 <b>SB:</b> 46-4		65
<b>3.4</b>	Formulate hypotheses, drawing conclusions, and making convincing arguments based on data analysis.	61 <b>SB:</b> 46-5		68-76 <b>SB:</b> 47-1 to 47-6, 48-1 to 48-5
<b>3.4a</b>	Analyze data and draw conclusions to predict outcomes based on data displays such as line graphs, bar graphs, or frequency tables.			69-73 <b>SB:</b> 47-6, 48-3
<b>3.6</b>	Make predictions and compare results using both experimental and theoretical probability drawn from real-world problems.		75, 78 <b>SB:</b> 57-2, 57-3	<b>SB:</b> 57-1

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<b>3.6a</b>	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.			
<b>3.6b</b>	Make predictions based on data obtained from simple probability experiments.		75, 78 <b>SB:</b> 57-3	
<b>3.6c</b>	Describe an event as likely or unlikely and explain the degree of likelihood using words such as certain, very likely, not likely, or impossible.		73 (T.G.)	
<b>3.7</b>	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).		76, 77 <b>SB:</b> 58-1, 58-2, 58-3	
<b>3.7a</b>	Determine the number of possible outcomes for simple events using a variety of methods such as: organized lists or tree diagrams.		76, 77 <b>SB:</b> 58-2	
	<b>STANDARD 4</b>			
<b>4.</b>	<b>Students use geometric concepts, properties, and relationships in problem-solving situations and communicate the reasoning used in solving these problems.</b>			
<b>4.2</b>	Describe, analyze and reason informally about the properties (for example, parallelism, perpendicularity, congruence) of two- and three-dimensional figures.			3, 5, 17, 18 <b>SB:</b> 32-1 to 32-5, 33-1, 34-1 to 34-6

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<b>4.2a</b>	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).			2-12, 23, 24 <b>SB:</b> 32-1 to 32-5, 33-1, 34-1 to 34-6, 34-10
<b>4.2b</b>	Make and test conjectures about geometric relationships and develop logical arguments to justify conclusions.			10, 13, 14, 25 <b>SB:</b> 32-5, 34-1
<b>4.4</b>	Solve problems using coordinate geometry.	77 <b>SB:</b> 43-1, 44-4	<b>SB:</b> 43-1	15 <b>SB:</b> 43-1
<b>4.4a</b>	Plot points on a coordinate graph in quadrant 1.	<b>SB:</b> 44-4		15
<b>4.4b</b>	Draw a graph (in quadrant 1) from a given scenario or table.	77 (T.G.) <b>SB:</b> 44-4		<b>SB:</b> 44-5
<b>4.5</b>	Solving problems involving perimeter and area in two dimensions, and involving surface area and volume in three dimensions.			40-54 <b>SB:</b> 38-1 to 38-13, 39-1 to 39-5
<b>4.5a</b>	Solve problems involving the perimeter of polygons.			41, 42 <b>SB:</b> 38-1, 38-2, 38-13
<b>4.5b</b>	Solve problems involving area of polygons (square, rectangle, parallelogram, rhombus, triangle).			43-50 <b>SB:</b> 38-4 to 38-11
<b>4.6</b>	Transforming geometric figures using reflections, translations, and rotations to explore congruence.			20 <b>SB:</b> 60-4
<b>4.6a</b>	Identify congruent shapes using reflections, rotations, and translations.			
<b>4.6b</b>	Show lines of symmetry on a two-dimensional figure.			17 <b>SB:</b> 60-1
<b>STANDARD 5</b>				

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<b>5.</b>	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.			
<b>5.1</b>	Estimate, use and describe measures of distance, perimeter, area, volume, capacity, weight, mass, and angle comparison.			30-38 <b>SB:</b> 36-3, 36-6, 37-2, 38-1
<b>5.1a</b>	Determine the appropriate unit of measure, metric and US customary, when estimating distance, capacity, and weight.			30, 35, 36 <b>SB:</b> 45-1
<b>5.1b</b>	Estimate and use standard and/or metric units for length, weight and temperature.			29-32, 34, 35 <b>SB:</b> 36-1 to 36-7, 40-4, 41-1, 41-2
<b>5.1c</b>	Estimate the area of a polygon.			44 <b>SB:</b> 38-4
<b>5.2</b>	Estimate, make, and use direct and indirect measurements to describe and make comparisons.			60, 61, 64 <b>SB:</b> 52-4, 52-5
<b>5.2a</b>	Estimate, make, and use direct and indirect measurements to describe and make comparisons.			60, 61, 64 <b>SB:</b> 52-4, 52-5
<b>5.3</b>	Read and interpret various scales including those based on number lines, graphs, and maps.	64, 65		60, 61, 68 <b>SB:</b> 52-4, 52-5
<b>5.3a</b>	Read and interpret scales on number lines, graphs, and maps.	64, 65		60, 61
<b>5.3b</b>	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).			69 (T.G.) <b>SB:</b> 47-2



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<b>5.4</b>	Develop and use formulas and procedures to solve problems involving measurement.			42, 46-48, 50-54 <b>SB:</b> 38-3, 38-5 to 38-7, 38-9 to 38-12, 39-2 to 39-4
<b>5.4a</b>	Use formulas and/or procedures to solve problems involving the perimeter of a polygon.			40-42 <b>SB:</b> 38-1, 38-2, 38-3
<b>5.4b</b>	Use formulas and/or procedures to solve problems involving the area of squares, rectangles, parallelograms, rhombus, and triangles.			43-48 <b>SB:</b> 38-6, 38-7, 38-9, 38-10
<b>5.5</b>	Describe how a change in an object's linear dimensions affects its perimeter, area, and volume.			51 <b>SB:</b> 38-11
<b>5.5a</b>	Demonstrate how changing one of the dimensions of a rectangle or triangle affects its perimeter and area using concrete materials or graph paper.			51 <b>SB:</b> 38-11
	<b>STANDARD 6</b>			
<b>6.</b>	<b>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.</b>			
<b>6.1</b>	Use models to explain how ratios, proportions, and percents can be used to solve real-world problems.		9, 67 <b>SB:</b> 12-8, 29-3, 53-1 to 53-4	56-61 <b>SB:</b> 52-1 to 52-5
<b>6.1a</b>	Use concrete materials or pictures to determine commonly used percentages (for example, 25%, 50%) in problem-solving situations.		67, 72	

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<b>6.2</b>	Construct, use and explain procedures to compute and estimate with whole numbers, fractions, decimals, and integers.	23-28, 68, 69 <b>SB:</b> 6-1, 7-1, 9-1, 49-1, 49-2, 50-1, 50-2, 59-5, 59-6	12, 24, 25, 54-65 <b>SB:</b> 13-3, 15-1, 18-3	
<b>6.2a</b>	Demonstrate conceptual meaning or addition and subtraction of fractions in problem solving situations (common fractions with like and unlike denominators, mixed numbers and decimals to thousandth).		18, 21, 54 <b>SB:</b> 17-1, 17-4	
<b>6.2b</b>	Use and explain strategies to add/subtract decimals and fractions in problem solving situation (to common fractions what like and unlike denominators, mixed numbers, and decimals to thousandths)		14-20, 22, 23, 54 <b>SB:</b> 15-1, 15-2, 15-3, 16-1, 16-4, 26-2, 26-3	
<b>6.2c</b>	Find equivalent representations by decomposing and composing whole numbers [for example, $48 \times 12 = (48 \times 10) + (48 \times 2)$ ].	3, 21 <b>SB:</b> 1-5, 5-3		
<b>6.2d</b>	Demonstrate proficiency with the four basic operations using whole numbers.	23-28 <b>SB:</b> 6-1, 7-1, 8-7, 10-2, 10-6		
<b>6.3</b>	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.	27-29, 48, 49, 51, 52 <b>SB:</b> 49-1, 49-2, 50-1, 50-2, 50-3	24-27 <b>SB:</b> 13-3, 18-3, 18-4, 45-3, 45-5, 45-6, 45-8 to 45-11	<b>SB:</b> 49-1, 50-1
<b>6.3a</b>	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.	27-29, 48, 49, 51, 52 <b>SB:</b> 49-1, 49-2, 50-1 to 50-3	24-27 <b>SB:</b> 13-3, 18-3, 18-4, 45-3, 45-5, 45-6, 45-8 to 45-11	<b>SB:</b> 49-1, 50-1

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<b>6.4</b>	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.		26, 27, 32, 56, 65, 72 <b>SB:</b> 45-3	
<b>6.4a</b>	Apply appropriate computation methods to solve problems involving whole numbers, common fractions, and decimals (use only addition and subtraction of fractions and decimals).	29, 30, 31 <b>SB:</b> 45-1, 45-4 to 45-8, 45-14, 45-15	26, 27, 32, 56, 65, 72 <b>SB:</b> 45-4, 45-5, 45-9	
<b>6.4b</b>	In problem solving situation, determine whether the results are reasonable and justify those results with accurate computation.	49 <b>SB:</b> 45-8	26, 56 <b>SB:</b> 45-3, 45-11	