



# Math Teachers Press, Inc.

4850 Park Glen Road, Minneapolis, MN 55416  
 phone (800) 852-2435 fax (952) 546-7502

## CORRELATION OF COLORADO MODEL CONTENT STANDARDS TO *MOVING WITH ALGEBRA GRADE 7*

|                   |  | Part A<br>Student Book<br>Skill Builders (SB)  | Part B<br>Student Book<br>Skill Builders (SB)      |
|-------------------|--|--|--|
| <b>STANDARD 1</b> |  |  |  |
| <b>1.</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>1.1</b>        | Demonstrate meanings for integers, rational numbers, percents, exponents, square roots, and pi. Use physical materials and technology in problem solving situations. |  |  |
| <b>1.1a</b>       | Recognize and use equivalent representations of positive rational numbers.   | 3, 16, 17, 21-23, 25, 85, 86, 90, 92, 134, 140-142, 161-168<br><b>SB:</b> 1, 2, 13, 16-18, 69, 71, 72, 110, 111, 115, 116, 130-132, 140, 145 | 215, 216, 294-297, 301<br><b>SB:</b> 184, 229, 252 |
| <b>1.1b</b>       | Use models to represent integers.  | 63-67<br><b>SB:</b> 54, 55, 139  | 240-243<br><b>SB:</b> 200, 201                     |
| <b>1.1c</b>       | Use exponents to indicate how many times a base is used as a factor for positive integers.   | 16-19<br><b>SB:</b> 13, 14   | 215, 294, 295, 300, 301<br><b>SB:</b> 229, 252     |
| <b>1.2</b>        | Read, write, and order integers, rational numbers and common irrational numbers.   |  | 209<br><b>SB:</b> 177                              |
| <b>1.2a</b>       | Read, write, order and compare positive rational numbers and integers.   | 6, 7, 64, 88-90, 135, 136<br><b>SB:</b> 5, 6, 54, 67-69, 112, 113, 139, 140, 144   | 241, 242<br><b>SB:</b> 200, 201, 204               |

|                   |  | <b>Part A<br/>Student Book<br/>Skill Builders (SB)</b>   | <b>Part B<br/>Student Book<br/>Skill Builders (SB)</b>                        |
|-------------------|--|--|---|
| <b>1.2b</b>       | Locate positive rational numbers and integers on a number line.  | 62-65, 67, 84, 89,<br>130, 131, 137<br><b>SB:</b> 54, 55, 65,<br>104, 107, 139   | 241-243<br><b>SB:</b> 200, 201  |
| <b>1.3</b>        | Apply number theory concepts (for example, primes, factors, multiples) to represent numbers in various ways.   | 16, 17, 20-23, 25<br><b>SB:</b> 13, 15-18  |   |
| <b>1.3a</b>       | Describe numbers by their characteristics (for example, even, odd, prime, composite, divisibility, square).  | 16, 17, 20, 21<br><b>SB:</b> 13, 15, 16  | 215, 216, 301,<br>304<br><b>SB:</b> 184, 229                                  |
| <b>1.4</b>        | Use the relationships among fractions, decimals, and percents, include the concepts of ratio and proportion in problem-solving situations.   |  |   |
| <b>1.4a</b>       | Use the relationships among fractions, decimals and percents including the concepts of ratio and proportion in problem solving situation.  | 169, 171-179<br><b>SB;</b> 133-138   | 222, 225-227,<br>275-278<br><b>SB:</b> 187-189, 191,<br>192, 222, 223,<br>246 |
| <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.  |  |   |
| <b>1.6a</b>       | Estimate, solve and justify the reasonableness of solutions to problems involving positive rational numbers or integers.   | 30-33, 41, 51-55,<br>59, 103-106, 116-<br>119, 145, 146,<br>158-160, 172<br><b>SB:</b> 25-28, 42-46,<br>51-53, 84-88,<br>100, 101, 119,<br>124, 128, 129,<br>135 | 275<br><b>SB:</b> 217, 218,<br>245, 246                                       |
| <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.   |  |   |

|                   |  | <b>Part A<br/>Student Book<br/>Skill Builders (SB)</b> | <b>Part B<br/>Student Book<br/>Skill Builders (SB)</b>                                    |
|-------------------|--|--|---|
| <b>2.1a</b>       | Represent, describe, and analyze numeric or geometric patterns involving common positive rational numbers or integers using tables, graphs, rules, or symbols.   | 35, 85-88, 122<br><b>SB:</b> 30, 66, 102, 140          | 199, 307-309<br><b>SB:</b> 234, 235   |
| <b>2.2</b>        | Describe patterns using variables, expressions, equations and inequalities in problem-solving situations.  |  |   |
| <b>2.2a</b>       | Solve problems by representing and analyzing patterns involving positive rational numbers or integers using tables, graphs, or rules.  |  | 231-234, 273, 274, 279, 280<br><b>SB:</b> 196-199, 224                                    |
| <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). |  |   |
| <b>2.3a</b>       | Predict and describe how a change in one quantity results in a change in another quantity in a linear relationship.  |  | 311-317<br><b>SB:</b> 236-239, 254  |
| <b>2.5</b>        | 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).                                   |  |   |
| <b>2.5a</b>       | Solve simple linear equations in problems solving situations using a variety of methods (informal, formal, or graphic).  |  | 273-280<br><b>SB:</b> 222-224, 246  |
| <b>2.5b</b>       | Translate written words to algebraic expressions/equations and conversely, algebraic expressions/equations to words.   |  | 249-252, 273, 274, 276, 277, 279, 280, 332, 333<br><b>SB:</b> 207, 208, 222-224, 245, 246 |
| <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>  |  |   |
| <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>Part A<br/>Student Book<br/>Skill Builders (SB)</b> | <b>Part B<br/>Student Book<br/>Skill Builders (SB)</b> |
|-------------------|---|--|--|
| <b>3.1a</b>       | Construct a histogram or stem and leaf from a set of given data.  |  |  |
| <b>3.1b</b>       | Read, interpret and draw conclusions from histograms, circle graphs, stem and leaf plots, and scatter plots.  | 179<br><b>SB:</b> 101                                  |  |
| <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.                               |  |  |
| <b>3.2a</b>       | Given a display of data (for example, line plot, stem and leaf plot, list of data), determine the mean, mode, median and range.                                       | 56, 57<br><b>SB:</b> 47-50                             |  |
| <b>3.3</b>        | Evaluate arguments that are based on statistical claims.  |  |  |
| <b>3.3a</b>       | Evaluate arguments that are based on measures of central tendency or data displays.   |  |  |
| <b>3.4</b>        | Formulate hypotheses, draw conclusions, and make convincing arguments based on data analysis.   |  |  |
| <b>3.4a</b>       | Analyze data and draw conclusions to predict outcomes based on data displays such as histograms and stem and leaf plots.  |  |  |
| <b>3.6</b>        | Make predictions and compare results using both experimental and theoretical probability drawn from real-world problems.  |  |  |
| <b>3.6a</b>       | Report the probability of an even in fraction, decimal and percent form.  |  |  |
| <b>3.6b</b>       | Determine the probability of simple independent events (for example, tossing a coin and rolling a die).   |  |  |
| <b>3.6c</b>       | Make predictions based on theoretical probability.  |  |  |
| <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). |  |  |
| <b>3.7a</b>       | Determine the number of possible outcomes for a given event using a variety of strategies, such as: tree diagrams, or organized lists.                                |  |  |
| <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>Part A<br/>Student Book<br/>Skill Builders (SB)</b> | <b>Part B<br/>Student Book<br/>Skill Builders (SB)</b>               |
|-------------|--|--|--|
| <b>4.2</b>  | Describe, analyze, and reason informally about the properties (for example, parallelism, perpendicularity, congruence) of two- and three dimensional figures.                    |  | 182-185, 187-200, 203<br><b>SB:</b> 169, 170                         |
| <b>4.2a</b> | Describe, analyze and reason informally about the attributes of two- and three-dimensional shapes (for example, angles, sides, edges, faces, vertices).                          |  | 182-185, 187-200<br><b>SB:</b> 148, 149, 155-167                     |
|             |  |  |  |
| <b>4.3</b>  | Apply the concepts of ratio, proportion, and similarity in problem-solving situations.   | 122<br><b>SB:</b> 102                                  | 222, 225-227, 275-278<br><b>SB:</b> 187-189, 191, 192, 222, 223, 246 |
| <b>4.3a</b> | Identify and compare similar shapes using ratio, proportion, or scale factor.  |  | 223, 224, 226, 227<br><b>SB:</b> 190-192                             |
|             |  |  |  |
| <b>4.4</b>  | Solve problems using coordinate geometry.  |  |  |
| <b>4.4a</b> | Construct a coordinate graph and plot ordered integer pairs in all four quadrants.   |  | 201, 202, 310<br><b>SB:</b> 168                                      |
|             |  |  |  |
| <b>4.5</b>  | Solving problems involving perimeter and area in two dimensions, and involving surface area and volume in three dimensions.  |  | 206-214<br><b>SB:</b> 174-183  |
| <b>4.5a</b> | Solve problems involving the circumference of a circle (formulas not provided).  |  | 209  |
| <b>4.5b</b> | Solve problems involving the areas of circles, triangles, and parallelograms (formulas not provided).  |  | <b>SB:</b> 181   |
| <b>4.5c</b> | solve problems involving the surface area of rectangular prisms (formulas not provided).   |  |  |
|             |  |  |  |
| <b>4.6</b>  | Transforming geometric figures using reflections, translations, and rotations to explore congruence.   |  |  |
| <b>4.6a</b> | Use reflections, translations, and/or rotations, to determine congruence between figures.  |  | 204<br><b>SB:</b> 171, 172   |
|             |  |  |  |
|             | <b>STANDARD 5</b>  |  |  |
| <b>5.</b>   | <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> |  |  |
| <b>5.1</b>  | Estimate, use, and describe measures of distance, perimeter, area, volume, capacity, weight, mass, and angle comparison.   |  | 186, 187, 206-214<br><b>SB:</b> 155, 174-182                         |

|                   |   | <b>Part A<br/>Student Book<br/>Skill Builders (SB)</b> | <b>Part B<br/>Student Book<br/>Skill Builders (SB)</b> |
|-------------------|---|--|--|
| <b>5.1a</b>       | Estimate the area of irregular shapes, angle measurements, or weight of common objects.   |  | 186, 197, 211, 234<br><b>SB:</b> 165, 199              |
| <b>5.2</b>        | Estimate, make, and use direct and indirect measurements to describe and make comparisons.  |  |  |
| <b>5.2a</b>       | Estimate, make and use direct and indirect measurements to describe and make comparisons.   |  | 225<br><b>SB:</b> 189                                  |
| <b>5.3</b>        | Read and interpret various scales including those based on number lines, graphs, and maps.  |  |  |
| <b>5.3a</b>       | 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).   |  | 226, 227<br><b>SB</b> 191, 192                         |
| <b>5.3b</b>       | Select the appropriate scale for a given problem (for example, using the appropriate scale when setting up a graph or intervals on a histogram).  |  | 312-314, 316<br><b>SB:</b> 236-239, 254                |
| <b>5.4</b>        | Develop and use formulas and procedures to solve problems involving measurement.  |  |  |
| <b>5.4a</b>       | Develop and use procedures or formulas to solve problems involving area of polygons (for example, trapezoids, regular hexagons, regular octagons).  |  | 210, 211<br><b>SB:</b> 178, 179                        |
| <b>5.5</b>        | Describe how a change in an object's linear dimensions affects its perimeter, area, and volume.   |  |  |
| <b>5.5a</b>       | 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).   |  | 209, 210<br><b>SB:</b> 183                             |
| <b>5.6</b>        | Select and use appropriate units and tools to measure to the degree of accuracy required in a particular problem-solving situation.   |  |  |
| <b>5.6a</b>       | 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).  |  | 228-230<br><b>SB:</b> 193-195, 253                     |
| <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 problems.</b> |  |  |

|             |  | <b>Part A<br/>Student Book<br/>Skill Builders (SB)</b>   | <b>Part B<br/>Student Book<br/>Skill Builders (SB)</b>             |
|-------------|--|--|--|
| <b>6.1</b>  | Use models to explain how ratios, proportions, and percents can be used to solve real-world problems.  |  |  |
| <b>6.1a</b> | Use concrete materials or pictures to explain how ratios, proportion, and percents can be used to solve real world problems.   | 122<br><b>SB</b> ; 102   | 220-222, 225,<br>275-278.<br><b>SB</b> : 187-189, 222,<br>223, 246 |
| <b>6.2</b>  | Construct, use, and explain procedures to compute and estimate with whole numbers, fractions, decimals, and integers.  |  |  |
| <b>6.2a</b> | Apply order of operations (including exponents with positive rational numbers).  | 14<br><b>SB</b> : 11   | 290-293, 306<br><b>SB</b> : 226-228                                |
| <b>6.2b</b> | Add, subtract, multiply, and divide positive rational numbers or integers.   | 26-29, 34-40, 42-51, 68-78, 87, 93-102, 107-115, 143, 144, 147-157<br><b>SB</b> : 19-24, 29-41, 56-60, 73-83, 89-99, 117, 118, 120-123, 125-127, 141-143 |  |
| <b>6.2c</b> | Explain strategies to add, subtract and multiply positive rational numbers.  | 26, 28, 34-40, 87, 93-102, 107-112, 143, 144, 147-150, 152<br><b>SB</b> : 19, 21, 22, 29-34, 66, 73-83, 89-92, 94, 103, 117, 118, 120-123                |  |
| <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. |  |  |
| <b>6.3a</b> | Explain why an estimate may be acceptable in place of an exact answer.   | 41   |  |

|             |  | <b>Part A<br/>Student Book<br/>Skill Builders (SB)</b>   | <b>Part B<br/>Student Book<br/>Skill Builders (SB)</b>                              |
|-------------|--|--|---|
| <b>6.3b</b> | solve problems using estimation and justify choice of techniques.  | 30-32, 41, 52-54, 59, 103-106, 117, 119, 145, 146, 158-160, 172<br><b>SB:</b> 25-28, 32, 42-44, 84-88, 100, 119, 128, 129, 135                     |   |
| <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 whether the results are reasonable. |  |   |
| <b>6.4a</b> | Determine what information is necessary or missing in a problem solving situation.   | Throughout   | Throughout  |
| <b>6.4b</b> | Solve problems involving positive rational numbers and/or integers.  | 32, 33, 54, 55, 58, 59, 78, 105, 106, 116, 118, 119, 145, 146, 159, 160<br><b>SB:</b> 27, 28, 44-46, 51-53, 87-94, 97, 98, 100, 101, 119, 128, 129 | 222, 225-227, 275-278<br><b>SB:</b> 187-189, 191, 192, 217, 218, 222, 223, 245, 246 |
| <b>6.4c</b> | Create a situation that matches a given number sentence involving positive rational numbers or integers, excluding division of fractions and decimals.   | 68, 171  | 284   |
| <b>6.4d</b> | Justify the reasonableness of a solution in a problem solving situation.   | Throughout   | Throughout  |