

## Maryland Voluntary State Curriculum, Grade 7, Correlated to *Maryland Math Connects*, Course 2

Lessons in which the indicator(s) and/or objective(s) is the primary focus are indicated in **bold**.

**Highlighted assessment limits** will be tested in the no calculator section of MSA.

All content standards are tested in MSA but not all objectives. Objectives that have an assessment limit are tested on MSA. Objectives without an assessment limit are not tested on MSA.

<b>Standard 1.0 Knowledge of Algebra, Patterns, and Functions: Students will algebraically represent, model, analyze, or solve mathematical or real-world problems involving patterns or functional relationships.</b>			
<b>1.A. Patterns and Functions</b>		<b>Lesson(s)</b>	<b>Page Number(s)</b>
<b>1.A.1.</b>	<b>Identify, describe, extend, and create numeric patterns and functions</b>	<b>1-9, Extend 1-9, 1-10, 2-7, 8-6</b>	<b>57-61, 62, 63-67, 112-113, 426-431</b>
<b>1.A.1.a.</b>	Complete a function table with a given two-operation rule <ul style="list-style-type: none"> <li><b>Assessment limit:</b> Use the operations (+, -, <math>\times</math>), numbers no more than 20 in the rule and whole numbers (0-500)</li> </ul>	<b>Extend 1-10, 3-7</b>	<b>68-69, 163-167</b>
<b>1.A.1.b.</b>	Identify and extend a geometric sequence	<b>Extend 1-9</b>	<b>62</b>
<b>1.A.1.c.</b>	Describe how a change in one variable in a linear function affects the other variable in a table of values	<b>Explore 3-7, 3-7, Extend 3-7, 6-3</b>	<b>162-168, 293-297</b>
<b>1.B. Expressions, Equations, and Inequalities</b>			
<b>1.B.1.</b>	<b>Write and evaluate expressions</b>	<b>1-4, 1-6, 3-1</b>	<b>38-41, 44-47, 128-133</b>
<b>1.B.1.a.</b>	Write an algebraic expression to represent unknown quantities <ul style="list-style-type: none"> <li><b>Assessment limit:</b> Use one unknown and one or two operations (+, -, <math>\times</math>, <math>\div</math> with no remainders) with whole numbers, fractions with denominators as factors of 100, or decimals with no more than three decimal places (0-500)</li> </ul>	<b>3-1</b>	<b>128-133</b>
<b>1.B.1.b.</b>	Evaluate algebraic expressions <ul style="list-style-type: none"> <li><b>Assessment limit:</b> Use one unknown and no more than two operations (+, -, <math>\times</math>, <math>\div</math> with no remainders) with whole numbers (0 – 200), fractions with denominators as factors of 100 (0 – 100), or decimals with no more than three decimal places (0 – 100)</li> </ul>	<b>1-6, 2-4, 2-5, 2-6, 2-8</b>	<b>44-47, 98, 105, 109-110, 116-117</b>
<b>1.B.1.c.</b>	Evaluate numeric expressions using the order of operations <ul style="list-style-type: none"> <li><b>Assessment limit:</b> Use no more than 4 operations (+, -, <math>\times</math>, <math>\div</math> with no remainders) with or without up to 2 sets of parentheses, brackets, or a division bar, with whole numbers (0 – 200), fractions with denominators as factors of 100 (0 – 100), or decimals with no more than three decimal places (0 – 100)</li> </ul>	<b>1-4</b>	<b>38-41</b>

1.B.1.d.	Simplify algebraic expressions represented as physical models by combining like terms	LA 2, <i>See also Teacher Reference Handbook</i>	LA6-LA9, <i>See also Teacher Reference Handbook</i>
1.B.2.	Identify, write, solve, and apply equations with inequalities	1-7, 1-10, Extend 1-10, 3-1, <b>Explore 3-2, 3-2, 3-3, 3-5</b> , Explore 3-7, 3-7, Extend 3-7, 5-6, 7-4, 7-5, 7-6, 7-7, 7-8, <b>Extend 7-8, 11-1, 11-2, 11-3, 11-4, 11-5, 11-6, 11-9, 11-10, LA 2, CSB7</b>	49-52, 63-67, 68-69, 128-146, 151-155, 162-168, 258-263, 361-367, 369-382, 572-576, 578-582, 584-593, 594-595, 596-599, 613-623, LA6-LA9, 740-741
1.B.2.a.	Write equations and inequalities to represent relationships <ul style="list-style-type: none"> <li><b>Assessment limit:</b> Use a variable, the appropriate relational symbols (<math>&gt;</math>, <math>\geq</math>, <math>&lt;</math>, <math>\leq</math>, <math>=</math>), and one or two operational symbols (<math>+</math>, <math>-</math>, <math>\times</math>, <math>\div</math>) on either side and use whole numbers, fractions with denominators as factors of 100, or decimals with no more than three decimal places (0 – 500)</li> </ul>	1-7, 3-1, 7-4	49-52, 128-133, 361-365
1.B.2.b.	Determine the unknown in a linear equation <ul style="list-style-type: none"> <li><b>Assessment limit:</b> Use one or two operations (<math>+</math>, <math>-</math>, <math>\times</math>) and the unknown only once with whole numbers (0 – 500), fractions with denominators as factors of 100 (0 – 50), or decimals with no more than three decimal places (0 – 100)</li> </ul>	1-7, <b>Explore 3-2, 3-2, 3-3, 3-5, 5-6, 7-4, LA 2</b>	49-52, 134-135, 136-142, 151-155, 258-263, 361-365, LA6-LA9
1.B.2.c.	Solve for the unknown in an inequality <ul style="list-style-type: none"> <li><b>Assessment limit:</b> Use an inequality with one variable with a positive whole number coefficient and one operation (<math>+</math>, <math>-</math>, <math>\times</math>, <math>\div</math> with no remainders) using whole numbers or decimals with no more than 2 decimal places (0 – 500)</li> </ul>	CSB7	740-741
1.B.2.d.	Identify or graph solutions of inequalities on a number line <ul style="list-style-type: none"> <li><b>Assessment limit:</b> Use whole numbers (0 – 50)</li> </ul>	CSB7	740-741
1.B.2.e.	Apply given formulas to a problem solving situation <ul style="list-style-type: none"> <li><b>Assessment limit:</b> Use formulas having no more than three variables and up to two operations, with whole numbers, fractions with denominators as factors of 100, or decimals with no more than three decimal places (0 – 100)</li> </ul>	3-3, 7-4, 7-5, 7-6, 7-7, 7-8, <b>Extend 7-8, 11-1, 11-2, 11-3, 11-4, 11-5, 11-6, 11-9, 11-10</b>	142-146, 361-367, 369-383, 572-576, 578-582, 584-599, 613-623
<b>1.C. Numeric and Graphic Representations of Relationships</b>			
1.C.1.	Locate points on a number line and in a coordinate plane	2-1, 2-2, 2-3, 2-4, 2-5, 2-6, 3-7, 5-1, 6-3, <b>Extend 6-6, 8-5, 8-6, 10-9, 10-10,</b>	80-92, 95-99, 103-111, 163-167, 230-231, 293-297, 316, 424-431, 553-562,

		Explore 11-10	624-625
<b>1.C.1.a.</b>	Represent rational numbers on a number line <ul style="list-style-type: none"> <li><b>Assessment limit:</b> Use rational numbers (-100 to 100)</li> </ul>	<b>2-1, 4-9, 5-1</b>	<b>80-83, 215-220, 230-235</b>
<b>1.C.1.b.</b>	Graph ordered pairs in a coordinate plane <ul style="list-style-type: none"> <li><b>Assessment limit:</b> Use no more than 4 ordered pairs of rational numbers (-20 to 20)</li> </ul>	<b>2-3, 3-7, 6-3, Extend 6-6, 8-5, 8-6, 10-9, 10-10, Explore 11-10</b>	<b>88-92, 163-167, 293-297, 316, 424-425, 426-431, 553-562, 624-625</b>
<b>1.C.1.c.</b>	Graph linear equations with one operation in a coordinate plane	<b>Extend 1-10, 2-3, 3-7, Extend 3-7, Extend 6-6</b>	<b>68-69, 88-92, 163-168, 316</b>
<b>1.C.2.</b>	Analyze linear relationships	6-3	293-297
<b>1.C.2.a.</b>	Identify and describe the change represented in a table of values <ul style="list-style-type: none"> <li><b>Assessment limit:</b> Identify increase, decrease, or no change</li> </ul>	6-3	293-297
<b>1.C.2.b.</b>	Describe the rate of change of a linear relationship by a table of values and a graph	<b>6-3</b>	<b>293-297</b>
<b>Standard 2.0 Knowledge of Geometry: Students will apply the properties of one-, two-, or three-dimensional geometric figures to describe, reason, or solve problems about shape, size, position, or motion of objects.</b>			
<b>2.A. Plane Geometric Figures</b>			
<b>2.A.1.</b>	Analyze the properties of plane geometric figures	<b>10-1, 10-2, 10-3, 10-4, 10-5, Explore 10-6, 10-7, 10-8, Extend 10-8, 10-9, 10-10, 11-1, Explore 11-2, 11-2, Explore 11-3, 11-3, 11-4, 11-6, Extend 11-6, 12-2, LA 3, LA 4, LA 5</b>	<b>510-562, 572-601, 640-645, LA10-LA20</b>
<b>2.A.1.a.</b>	Identify and describe angles formed by intersecting lines, line segments, and rays <ul style="list-style-type: none"> <li><b>Assessment limit:</b> Use vertical, adjacent, complementary, or supplementary angles (Include the angle symbol <math>\angle</math> m)</li> </ul>	<b>10-1, 10-2, LA 3</b>	<b>510-513, 514-517, LA10-LA13</b>
<b>2.A.1.b.</b>	Identify angles formed when two parallel lines are cut by a transversal	<b>LA 3</b>	<b>LA10-LA13</b>
<b>2.A.1.c.</b>	Identify the parts of right triangles	<b>12-2, LA5</b>	<b>640-645, LA18-LA20</b>
<b>2.A.2.</b>	Analyze geometric relationships	<b>10-1, 10-2, 10-3, 10-4, Explore 10-6, 10-6, 11-1, Explore 11-2, 11-2, Explore 11-3, 11-3, 11-4, 11-5, 11-6, Extend 11-6, 11-7, Explore 11-8, 11-8, 11-9, 11-10, Extend 11-</b>	<b>510-529, 532-538, 572-601, 603-625</b>

		<b>10</b>	
<b>2.A.2.a.</b>	Determine a missing angle measurement using the sum of the interior angles of polygons. <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Use angle measures in a quadrilateral</li> </ul>	<b>10-4, 10-6, 10-8</b>	<b>524-529, 533-538, 546-551</b>
<b>2.A.2.b.</b>	Determine the measure of angles formed by intersecting lines, line segments, and rays. <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Use vertical, adjacent, complementary, or supplementary angles</li> </ul>	<b>10-1, 10-2, LA 3</b>	<b>510-513, 514-517, LA10-LA13</b>
<b>2.A.2.c.</b>	Describe the relationship between the legs and hypotenuse of right triangles	<b>12-2, LA 5</b>	<b>640-645, LA18-LA20</b>
<b>2.B. Solid Geometric Figures – Not Assessed at Grade 7</b>			
<b>2.C. Representations of Geometric Figures</b>			
<b>2.C.1.</b>	Represent plane geometric figures	10-1, 10-2, 10-4, 10-6, 10-7, 10-8, Extend 10-8, 10-9, 10-10	510-517, 524-529, 533-562
<b>2.C.1.a.</b>	Construct geometric figures using a variety of construction tools <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Construct a circle using a given line segment as the radius in whole number inches or centimeters</li> </ul>	<i>See Teacher Reference Handbook</i>	<i>See Teacher Reference Handbook</i>
<b>2.C.1.b.</b>	Construct geometric figures using a variety of construction tools <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Construct a line segment congruent to a given line segment</li> </ul>	<i>See Teacher Reference Handbook</i>	<i>See Teacher Reference Handbook</i>
<b>2.C.1.c.</b>	Construct geometric figures using a variety of construction tools <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Construct a perpendicular bisector to a given line segment or a bisector of a given angle</li> </ul>	<i>See Teacher Reference Handbook</i>	<i>See Teacher Reference Handbook</i>
<b>2.D. Congruence and Similarity</b>			
<b>2.D.1.</b>	Apply the properties of congruent polygons	10-7, 10-8, Extend 10-8, 10-9, 10-10, <b>LA 4, CSB9</b>	540-551, 553-562, <b>LA14-LA17, 743-744</b>
<b>2.D.1.a.</b>	Determine the congruent parts of polygons <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Use the length of corresponding sides or the measure of corresponding angles and whole numbers (0 – 1000)</li> </ul>	10-9, 10-10, <b>LA 4, CSB9</b>	553-563, <b>LA14-LA17, 743-744</b>
<b>2.D.1.b.</b>	Identify and describe similar polygons and their corresponding parts	<b>10-7</b>	<b>540-545</b>
<b>2.E. Transformations</b>			
<b>2.E.1.</b>	Analyze a transformation on a coordinate plane	10-8, <b>10-9, 10-10, CSB9</b>	546-551, <b>553-562, 743-744</b>
<b>2.E.1.a.</b>	Identify, describe, and plot the results of one transformation on a coordinate plane <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Identify or plot the result of one translation (horizontal or vertical), reflection (horizontal or vertical), or rotation about a given point (90° or 180°)</li> </ul>	10-8, <b>10-9, 10-10, CSB9</b>	546-551, <b>553-562, 743-744</b>
<b>2.E.1.b.</b>	Identify and describe transformations that	<b>10-10, CSB9, See</b>	<b>558-562, 743-744,</b>

	result in rotational and reflectional symmetry	<i>also Teacher Reference Handbook</i>	<i>See also Teacher Reference Handbook</i>
<b>Standard 3.0 Knowledge of Measurement: Students will identify attributes, units, or systems of measurements or apply a variety of techniques, formulas, tools or technology for determining measurements.</b>			
<b>3.A. Measurement Units– Not Assessed at Grade 8</b>			
<b>3.B. Measurement Tools– Not Assessed at Grade 8</b>			
<b>3.C. Applications in Measurement</b>			
<b>3.C.1.</b>	Estimate and apply measurement formulas	<b>3-6, Explore 3-7, 6-4, 6-5, 10-1, 10-2, 10-3, 10-7, 11-1, Explore 11-2, 11-2, Explore 11-3, 11-3, 11-4, 11-5, 11-6, 11-9, 11-10, Extend 11-10, 12-2, 12-3, 12-4, Extend 12-4, 12-5, LA 5, CSB 11, CSB 12, CSB 13</b>	<b>156-161, 162, 298-309, 510, 514-523, 540-545, 572-601, 613-625, 640-646, 649-659, LA18, 747, 748-749, 750</b>
<b>3.C.1.a.</b>	Estimate and determine the area of quadrilaterals <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> use parallelograms or trapezoids and whole number dimensions (0 – 1000)</li> </ul>	<b>3-6, Explore 10-6, 10-6, 11-1, Explore 11-2, 11-2, 11-6</b> Extend 11-6, 12-4, Extend 12-4, 12-5	<b>156-161, 532-538, 572-582, 596-601, 649-659</b>
<b>3.C.1.b.</b>	Determine the surface area of geometric solids <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Use rectangular prisms with whole number dimensions (0 – 1000)</li> </ul>	Extend 11-6, 12-4, <b>12-5, CSB 12</b>	<b>600-601, 649-653, 656-659, 748-749</b>
<b>3.C.1.c.</b>	Estimate pi using physical models	<b>Explore 11-3</b>	<b>583</b>
<b>3.C.1.d.</b>	Estimate and determine the volume of a triangular prism	<b>11-9</b>	<b>613-618</b>
<b>3.C.2.</b>	Analyze measurement relationships	<b>6-8</b>	<b>320-322</b>
<b>3.C.2.a.</b>	Determine a missing dimension for a figure using a scale. <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Use a polygon with no more than 8 sides using whole numbers (0 – 1000)</li> </ul>	<b>6-8</b>	<b>320-322</b>
<b>3.C.2.b.</b>	Determine the distance between 2 points using a drawing and a scale <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Use a scale of 1 cm = ?, ¼ inch = ?, or ½ inch = ?, and whole numbers (0 – 1000)</li> </ul>	<b>6-8</b>	<b>320-322</b>
<b>Standard 4.0 Knowledge of Statistics: Students will collect, organize, display, analyze, or interpret data to make decisions or predictions.</b>			
<b>4.A. Data Displays</b>			
<b>4.A.1.</b>	Organize and display data	<b>8-1, 8-2, 8-3, 8-4, Extend 8-4, 8-5, 8-6, Extend 8-6, 10-3, LA 6</b>	<b>396-401, 402-408, 410-422, 424-433, 518-523, LA21-LA25</b>
<b>4.A.1.a.</b>	Organize and display data <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Use no more than 20 data points using whole numbers (0 – 99)</li> </ul>	<b>8-1, 8-2, 8-3, 8-4, Extend 8-4, 8-5, 8-6, Extend 8-6, 10-</b>	<b>396-401, 402-408, 410-422, 424-433, 518-523, LA21-LA25</b>

		<b>3, LA 6</b>	
<b>4.A.1.b.</b>	Organize and display data to make circle graphs	<b>Extend 8-4, 10-3</b>	<b>422, 518-523</b>
<b>4.B. Data Analysis</b>		<b>Lesson(s)</b>	<b>Page Number(s)</b>
<b>4.B.1.</b>	Analyze data	<b>8-1, 8-3, 8-4, Extend 8-4, 8-5, 8-6, Extend 8-6, 8-7, 8-8, 8-9, 10-3, LA 6</b>	<b>396-401, 410-422, 424-449, 518-523, LA21-LA25</b>
<b>4.B.1.a.</b>	Recognize and analyze faulty interpretation or representation of data <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Use the choice of graphical display or the scale as leading to faulty interpretation or representation of data</li> </ul>	<b>8-9</b>	<b>444-449</b>
<b>4.B.1.b.</b>	Determine the best choice of a data display <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Use a given data set</li> </ul>	<b>8-4, 8-5, Extend 8-6, 8-7</b>	<b>415-421, 424-425, 432-433, 434-437</b>
<b>4.B.1.c.</b>	Analyze misleading data representation	<b>8-9</b>	<b>444-449</b>
<b>4.B.2.</b>	Describe a set of data	<b>8-1, 8-2, Extend 8-2, 8-3, LA 6</b>	<b>396-401, 402-409, 410-414, LA21-LA25</b>
<b>4.B.2.a.</b>	Analyze measures of central tendency to determine or apply mean, median, mode <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Use no more than 15 pieces of data for the mean or median; or 15 to 30 pieces of data for the mode, using whole numbers or decimals with no more than 2 decimal places (0 – 100)</li> </ul>	<b>8-2, Extend 8-2, 8-3</b>	<b>402-409, 410-414</b>
<b>Standard 5.0 Knowledge of Probability: Students will use experimental methods or theoretical reasoning to determine probabilities to make predictions or solve problems about events whose outcomes involve random variation.</b>			
<b>5.A. Sample Space</b>			
<b>5.A.1.</b>	Identify a sample space	<b>9-1, 9-2, 9-3, 9-4, 9-5, 9-6, 9-7, Extend 9-7, 9-8</b>	<b>460-478, 480-483, 484-497</b>
<b>5.A.1.a.</b>	Determine the number of outcomes <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Use no more than 3 independent events with a sample space of no more than 6 outcomes in each event</li> </ul>	<b>9-1, 9-2, 9-3, 9-4, 9-5, 9-6, 9-7, Extend 9-7, 9-8</b>	<b>460-478, 480-483, 484-497</b>
<b>5.B. Theoretical Probability</b>			
<b>5.B.1.</b>	Determine the probability of an event comprised of no more than 2 independent events	<b>9-1, 9-2, 9-4, 9-8</b>	<b>460-464, 465-470, 475-478, 492-497</b>
<b>5.B.1.a.</b>	Express the probability of an event as a fraction, a decimal, or a percent <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Use a sample space of no more than 35 outcomes and decimals with no more than 2 decimal places</li> </ul>	<b>9-1, 9-2, 9-3, 9-4, 9-5, 9-6 9-7, Extend 9-7, 9-8, Ch. 7 RSP</b>	<b>460-464, 465-470, 471-478, 480-497, 349</b>
<b>5.C. Experimental Probability</b>			
<b>5.C.1.</b>	Analyze the results of a survey or simulation	<b>8-6, 8-7, 8-8, 9-4, 9-5, 9-6, 9-7, Extend 9-7, 9-8</b>	<b>426-443, 475-490, 491, 492-497</b>
<b>5.C.1.a.</b>	Make predictions and express the probability of the results as a fraction, a decimal with no more than 2 decimal places, or a percent <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Use 25 or 50 results</li> </ul>	<b>8-5, 8-6, 8-7, 8-8, 9-1, 9-2, 9-3, 9-4, 9-5, 9-6, 9-7, Extend 9-7, 9-8</b>	<b>424-443, 460-464, 465-483, 486-497</b>
<b>5.C.2.</b>	Conduct a probability experiment	<b>9-2, 9-4, 9-6, 9-7,</b>	<b>465, 475, 484, 486,</b>

		<b>Extend 9-7</b>	<b>491</b>
<b>5.C.3.</b>	Compare outcomes of theoretical probability with the results of experimental probability	9-6, <b>9-7</b>	494-485, <b>486-490</b>
<b>5.C.4.</b>	Describe the difference between theoretical and experimental probability	<b>9-7</b>	<b>486-490</b>
<b>Standard 6.0 Knowledge of Number Relationships and Computation/Arithmetic: Students will describe, represent, or apply numbers or their relationships or will estimate or compute using mental strategies, paper/pencil or technology.</b>			
<b>6.A. Knowledge of Number and Place Value</b>			
<b>6.A.1.</b>	Apply knowledge of rational numbers and place value	1-2, 2-2, 4-4, 4-5, 4-6, 4-7, 4-9, 6-1, 6-9, LA 1	30-33, 84-87, 192-200, 202-210, 215-220, 282-286, 324-332, LA2-LA5
<b>6.A.1.a.</b>	Read, write, and represent whole numbers <ul style="list-style-type: none"> <li><b>Assessment limit:</b> Use exponential notation with bases no more than 12 and exponents no more than 3 in standard form (0–1000)</li> </ul>	<b>1-2</b> , CSB1	<b>30-33</b> , 734
<b>6.A.1.b.</b>	Express decimals using expanded form <ul style="list-style-type: none"> <li><b>Assessment limit:</b> Use decimals with no more than 4 decimal places (0–100)</li> </ul>	<i>See Teacher Reference Handbook</i>	<i>See Teacher Reference Handbook</i>
<b>6.A.1.c.</b>	Determine equivalent forms of rational numbers expressed as fractions, decimal, percents, and ratios <ul style="list-style-type: none"> <li><b>Assessment limit:</b> Use positive rational numbers (0–100)</li> </ul>	4-4, <b>4-5, 4-6, 4-7, 4-9, 6-1, 6-9</b>	192-195, <b>196-200, 202-210, 215-220, 282-286, 328-332</b>
<b>6.A.1.d.</b>	Compare, order and describe rational numbers with or without relational symbols (<, >, =) <ul style="list-style-type: none"> <li><b>Assessment limit:</b> Use no more than 4 fractions with denominators that are factors of 300 that are less than 101 (0–100), decimals with no more than 4 decimal places (0–100), percents (0–100) or integers (–100 to 100)</li> </ul>	<b>2-2</b> , 4-4, 4-5, 4-6, 4-7, <b>4-9, 5-1</b> , 6-1, 6-9	<b>84-87</b> , 192-200, 202-210, <b>215-220, 230-235</b> , 282-286, 328-332
<b>6.A.1.e.</b>	Express whole numbers and decimals in scientific notation	<b>LA 1</b>	<b>LA2-LA5</b>
<b>6.B. Number Theory– Not Assessed at Grade 7</b>			
<b>6.C. Number Computation</b>			
<b>6.C.1.</b>	Analyze number relations and compute	<i>Used throughout the text.</i> For example, 1-2, 1-3, Explore 2-4, 2-4	<i>Used throughout the text.</i> For example, 30-37, 80-83
<b>6.C.1.a.</b>	Add, subtract, multiply, and divide integers <ul style="list-style-type: none"> <li><b>Assessment limit:</b> Use one operation (–100 to 100)</li> </ul>	<b>Explore 2-4, 2-4, Explore 2-5, 2-5, 2-6, 2-8</b>	<b>93-99, 101-111, 114-118</b>
<b>6.C.1.b.</b>	Add, subtract and multiply positive fractions and mixed numbers <ul style="list-style-type: none"> <li><b>Assessment limit:</b> Use no more than 2 operations and positive fractions or mixed numbers with denominators as factors of 300 less than 101 (0–2000)</li> </ul>	<b>5-2, 5-3, Explore 5-5, 5-5</b>	<b>236-246, 250-257</b>
<b>6.C.1.c.</b>	Divide fractions and mixed numbers	<b>5-7</b>	<b>265-270</b>
<b>6.C.1.d.</b>	Calculate powers of integers and square roots of perfect square whole numbers	1-2, <b>1-3</b> , 12-1, LA5	30-33, <b>34-37</b> , 636-639, LA18-LA20

	<ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Use exponents of no more than 3 for integers (-10 to 20) or square roots of perfect square whole numbers (0-100)</li> </ul>		
6.C.1.e.	<p>Use the laws of exponents to simplify expressions</p> <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Use the rules of exponents (power times power or power divided by power) with the same whole number base (0-100) and exponents (0-10)</li> </ul>	See Maryland: Map to Success	See Maryland: Map to Success
6.C.1.f.	<p>Identify and use the properties of addition and multiplication to simplify expressions</p> <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Use the commutative property of addition or multiplication, associative property of addition or multiplication, or the identity property for one or zero with whole numbers (0-100)</li> </ul>	1-8, 2-5	53-56, 96-97
6.C.1.g.	Determine percent of a number	Explore 7-1, 7-1, Ch. 7. RSP, 7-2, 7-3, 7-4, 7-6, 7-7, 7-8, Extend 7-8, Extend 8-4, 10-3 8-3	342-348, 349, 350-354, 355-360, 369-374, 375-383, 422, 518-523
6.C.2.	Estimation	5-1, 7-3, 7-5, 12-1, 12-2, CSB2	230-235, 355-360, 366-367, 636-639, 640-645, 735
6.C.2.a.	<p>Determine approximate sums, differences, products, and quotients</p> <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Use no more than 3 positive rational numbers (0-1000)</li> </ul>	5-1, 7-3, 7-5, 12-1, 12-2, CSB2	230-235, 355-360, 366-367, 636-639, 640-645, 735
6.C.3.	Analyze ratios, proportions, or percents	4-6, 4-7, 6-1, 6-2, 6-3, 6-4, 6-5, 6-6, Extend 6-6, 6-8, Extend 6-8, Explore 7-1, 7-1, 7-2, 7-3, 7-4, 7-6, 7-7, 7-8, Extend 7-8, 8-7, 10-3, 10-7, Explore 11-3, Extend 12-4, LA 4, CSB6	202-210, 282-316, 320-327, 342-365, 369-383, 434-437, 518-523, 540-545, 583, 654-655, LA14-LA17, 739
6.C.3.a.	<p>Determine equivalent ratios</p> <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Use denominators as factors of 300 but less than 101 and whole numbers (0-100)</li> </ul>	4-6, 6-1, 10-7	202-205, 282-286, 540-545
6.C.3.b.	<p>Determine and use rates, unit rates, and percents as ratios in the context of a problem</p> <ul style="list-style-type: none"> <li>• <b>Assessment limit:</b> Use whole numbers (0-1000)</li> </ul>	6-2, 6-3, 6-4, 6-5, Explore 11-3	287-297, 298-309, 583
6.C.3.c.	Determine rate of increase and decrease, discounts, simple interest, commission, sales tax	7-6, 7-7, 7-8	369-382
6.C.3.d.	Determine percent of a number	Explore 7-1, 7-1, Ch. 7. RSP, 7-2, 7-	342-348, 349, 350-354, 355-360, 369-

		<b>3, 7-4, 7-6, 7-7, 7-8, Extend 7-8,</b> Extend 8-4, 10-3 8-3	374, <b>375-383</b> , 422, 518-523
<b>Standard 7.0 Processes of Mathematics: Students demonstrate the processes of mathematics by making connections and applying reasoning to solve problems and to communicate their findings.</b>			
<b>7.A. Problem Solving</b> <i>Maryland Math Connects addresses problem solving throughout the text and in Problem-Solving Investigation lessons.</i>			
<b>7.A.</b>	Problem Solving	<i>Used throughout the text.</i> For example, 1-5, 2-7, 3-4, 4-3	<i>Used throughout the text.</i> For example, 42-43, 112-113, 148-149, 190-191
<b>7.A.1.</b>	Apply a variety of concepts, processes, and skills to solve problems	<i>Used throughout the text.</i> For example, 1-5, 2-7, 3-4, 4-3	<i>Used throughout the text.</i> For example, 42-43, 112-113, 148-149, 190-191
<b>7.A.1.a.</b>	Identify the question in the problem	<i>Used throughout the text.</i> For example, 1-5, 2-7, 3-4, 4-3	<i>Used throughout the text.</i> For example, 42-43, 112-113, 148-149, 190-191
<b>7.A.1.b.</b>	Decide if enough information is present to solve the problem	1-1	25-29
<b>7.A.1.c.</b>	Make a plan to solve a problem	<i>Used throughout the text.</i> For example, 1-5, 2-7, 3-4, 4-3	<i>Used throughout the text.</i> For example, 42-43, 112-113, 148-149, 190-191
<b>7.A.1.d.</b>	Apply a strategy, i.e. draw a picture, guess and check, finding a pattern, writing an equation	<i>Used throughout the text.</i> For example, 1-5, 2-7, 6-7, 12-3	<i>Used throughout the text.</i> For example, 42-43, 112-113, 318-319, 646-647
<b>7.A.1.e.</b>	Select a strategy, i.e. draw a picture, guess and check, finding a pattern, writing an equation	<b>1-5, 2-7, 6-7, 9-5, 9-6, 10-5, 11-5, 12-3</b>	<b>42-43, 112-113, 318-319, 480-483, 484-485, 530-531, 594-595, 646-647</b>
<b>7.A.1.f.</b>	Identify alternative ways to solve a problem	4-3, 4-8, 5-4, 7-5, 8-5, 9-6, 10-5, 11-5	190-191, 211-214, 248-249, 366-367, 424-425, 484-485, 530-531, 594-595
<b>7.A.1.g.</b>	Show that a problem might have multiple solutions or no solution	3-6, 3-7, 4-3	156-161, 163-167, 190-191
<b>7.A.1.h.</b>	Extend the solution of a problem to a new problem situation	<i>Used throughout the text.</i> For example, 8-5, 10-5, 11-5, 12-3	<i>Used throughout the text.</i> For example, 424-425, 530-531, 594-595, 646-647
<b>7.B. Reasoning</b> <i>Maryland Math Connects addresses reasoning in every lesson. See H.O.T. Problems: Challenge, Find the Error, Number Sense, Open Ended, Reasoning, Which One Doesn't Belong</i>			
<b>7.B.</b>	Reasoning	<i>Used throughout the text.</i> For example, 1-3, 5-6, 7-6, 11-9	<i>Used throughout the text.</i> For example, 34-37, 258-263, 369-374, 613-618
<b>7.B.1.</b>	Justify ideas or solutions with mathematical concepts or proofs	<i>Used throughout the text.</i> For	<i>Used throughout the text.</i> For example,

		example, 1-3, 5-6, 7-6, 11-9, Ch. 5 RSP	34-37, 258-263, 369-374, 613-618, 264
<b>7.B.1.a.</b>	Use inductive or deductive reasoning	Explore 4-1, 10-5	180, 530-531
<b>7.B.1.b.</b>	Make or test generalizations	<i>Used throughout the text.</i> For example, 1-10, Extend 8-2, 11-3, Extend 12-4	<i>Used throughout the text.</i> For example, 63-67, 409, 584-588, 654-655
<b>7.B.1.c.</b>	Support or refute mathematical statements or solutions	<i>Used throughout the text.</i> For example, 7-3, 10-4, 10-6, 11-1	<i>Used throughout the text.</i> For example, 355-360, 524-529, 533-538, 572-576
<b>7.B.1.d.</b>	Use methods of proof, i.e. direct, indirect, paragraph, or contradiction.	<i>Used throughout the text.</i> For example, 1-8, 10-4, 10-5, 10-6	<i>Used throughout the text.</i> For example, 53-56, 524-538
<b>7.C. Communication</b> <i>Maryland Math Connects addresses communication in every lesson. See H.O.T. Problems: Challenge, Find the Error, Number Sense, Open Ended, Reasoning, Which One Doesn't Belong, Writing in Math</i>			
<b>7.C.</b>	Communication	<i>Used throughout the text.</i> For example, Explore 2-4, 2-5, 7-6, 8-5	<i>Used throughout the text.</i> For example, 93-94, 103-106, 369-374, 424-425
<b>7.C.1.</b>	Present mathematical ideas using words, symbols, visual displays, or technology	Extend 1-10, Extend 3-7, 4-1, 4-2, Extend 6-8, Extend 7-8, Extend 8-2, Extend 8-4, 8-5, Extend 8-6, 9-5	68-69, 168, 181-189, 323, 383, 409, 422, 424-425, 432-433, 480-483
<b>7.C.1.a.</b>	Use multiple representations to express concepts or solutions	<i>Used throughout the text.</i> For example, Explore 3-2, Explore 3-7, Explore 11-8, Extend 11-10	<i>Used throughout the text.</i> For example, 134-135, 162, 607, 624-625
<b>7.C.1.b.</b>	Express mathematical ideas orally	<i>Used throughout the text.</i> For example, Extend 8-2, 9-6, Extend 9-7	<i>Used throughout the text.</i> For example, 409, 484-485, 491
<b>7.C.1.c.</b>	Explain mathematically ideas in written form	<i>Used throughout the text.</i> For example, 2-5, 6-2, 7-1, 8-9	<i>Used throughout the text.</i> For example, 101-102, 287-292, 344-348, 444-449
<b>7.C.1.d.</b>	Express solutions using concrete materials	<i>Used throughout the text.</i> For example, Explore 2-4, Explore 3-2, Explore 5-5, Explore 7-1	<i>Used throughout the text.</i> For example, 93-94, 134-435, 250-251, 342-343
<b>7.C.1.e.</b>	Express solutions using pictorial, tabular, graphical, or algebraic methods	<i>Used throughout the text.</i> For example, 8-5, 11-7, Explore 11-8, 11-8, Extend 11-10	<i>Used throughout the text.</i> For example, 424-425, 603-612, 624-625

<b>7.C.1.f.</b>	Explain solutions in written form	<i>Used throughout the text.</i> For example, 1-3, 5-6, 7-6, 11-9	<i>Used throughout the text.</i> For example, 34-37, 258-263, 369-374, 613-618
<b>7.C.1.g.</b>	Ask questions about mathematical ideas or problems	<i>Used throughout the text.</i> For example, 8-3, 8-6, 8-7, 8-8	<i>Used throughout the text.</i> For example, 410-414, 426-431, 434-443
<b>7.C.1.h.</b>	Give or use feedback to revise mathematical thinking	<i>Used throughout the text.</i> For example, 8-6, 8-7, 8-8, 9-7	<i>Used throughout the text.</i> For example, 426-431, 434-443, 486-490
<b>7.D. Connections</b> <i>Maryland Math Connects addresses connections by including real-world application problems in every lesson. Career features are found in each chapter.</i>			
<b>7.D.</b>	Connections	<i>Used throughout the text.</i> For example, 7-6, 7-8, Extend 7-8, Extend 8-6	<i>Used throughout the text.</i> For example, 369-374, 379-383, 432-433
<b>7.D.1.</b>	Relate or apply mathematics within the discipline, to other disciplines, and to life	<i>Used throughout the text.</i> For example, 7-6, 7-8, Extend 7-8, Extend 8-6	<i>Used throughout the text.</i> For example, 369-375, 379-383, 432-433
<b>7.D.1.a.</b>	Identify mathematical concepts in relationship to other mathematical concepts	<i>Used throughout the text.</i> For example, 2-5, 4-9, 11-2	<i>Used throughout the text.</i> For example, 103-106, 215-220, 578-582
<b>7.D.1.b.</b>	Identify mathematical concepts in relationship to other disciplines	<i>Used throughout the text.</i> For example, 3-3, 4-7, 6-2, 10-3	<i>Used throughout the text.</i> For example, 142-146, 206-210, 287-292, 518-523
<b>7.D.1.c.</b>	Identify mathematical concepts in relationship to life	<i>Used throughout the text.</i> For example, 6-2, 6-8, 7-3, 7-7, Ch.1 RSP	<i>Used throughout the text.</i> For example, 287-292, 320-322, 355-360, 375-378, 24
<b>7.D.1.d.</b>	Use the relationship among mathematical concepts to learn other mathematical concepts	<i>Used throughout the text.</i> For example, 2-5, 4-9, 11-2, Ch. 4 RSP	<i>Used throughout the text.</i> For example, 103-106, 215-220, 578-582, 185

# New Maryland Photo to Come