

Houston County School District

Formative Assessments Pacing Guide for 8th Grade Math Standards

AL COS Standards	Vocabulary	Resources	Date Introduced	Date Tested	% Mastery	Names of Students W/Non-Mastery
Numbers and Operations						
<p>1. Use various strategies and operations to solve problems involving real numbers.</p> <p>ARMT Blueprint:</p> <ul style="list-style-type: none"> Multiple Choice- 6 items Grid- 1 item <p>Additional Minimum Required Content:</p> <ul style="list-style-type: none"> Using alternative representations of rational numbers. Ex. models, drawings, grids, graphs. Applying GCF, LCM, and prime and composite numbers, including the justification for the reasonableness of results, when working with rational numbers. Ex. A new music store is having a grand opening. Every 20th customer gets a free CD. Every 35th customer gets a free tote bag. The first customer to receive both gifts will be the 140th customer, because 140 is the LCM of 20 and 35. The answer (140th) is reasonable because it is larger than both 20 and 35. To say that the 5th customer, which is the GCF of 20 and 35, receives the gift is not reasonable because it is smaller than 20 and 35. Applying proportional reasoning. Ex. The amount of rainfall recorded for a certain town in a 24-hour period is 16 inches. Since the rain fell 2 inches every 3 hours, 24 inches of rain will fall in 1 ½ days if the rain continues at the same rate. Using vocabulary associated with sets, including union and intersection. Determining whether a number is rational or irrational Demonstrating computational fluency with operations on rational numbers 	Rational numbers GCF LCM Prime numbers Composite numbers Union Intersection Irrational numbers Operations Integers	ARMT Coach Item Specs. Buckle Down Work Out IXL Website Ladders to Success Glencoe Pre-Algebra	August	December		
AL COS Standards	Vocabulary	Resources	Date Introduced	Date Tested	% Mastery	Names of Students

Houston County School District
Formative Assessments Pacing Guide for 8th Grade Math Standards

						W/Non-Mastery
<p>2. Simplify expressions containing natural number exponents by applying one or more of the laws of exponents.</p> <p>ARMT Blueprint:</p> <ul style="list-style-type: none"> Multiple Choice- 4 items <p>Additional Minimum Required Content:</p> <ul style="list-style-type: none"> Writing numbers using scientific notations. 	Natural numbers Scientific Notation Standard form	ARMT Coach Item Specs. Buckle Down Work Out IXL Website Ladders to Success Glencoe Pre-Algebra	September	October		
<p>3. Use order of operations to evaluate and simplify algebraic expressions.</p> <p>ARMT Blueprint:</p> <ul style="list-style-type: none"> Multiple Choice- 3 items Grid- 1 item <p>Additional Minimum Required Content:</p> <ul style="list-style-type: none"> Applying the substitution principle. Applying the properties of operations on rational numbers to evaluate and simplify algebraic expressions. 	Order of operations Exponents Algebraic expression	ARMT Coach Item Specs. Buckle Down Work Out IXL Website Ladders to Success Glencoe Pre-Algebra	September	October		

Houston County School District

Formative Assessments Pacing Guide for 8th Grade Math Standards

AL COS Standards	Vocabulary	Resources	Date Introduced	Date Tested	% Mastery	Names of Students W/Non-Mastery
Algebra						
<p>4. Graph linear relations by plotting points or by using the slope and y-intercept.</p> <p>ARMT Blueprint:</p> <ul style="list-style-type: none"> • Multiple Choice- 3 items • Open-ended- 2 items. <p>Additional Minimum Required Content:</p> <ul style="list-style-type: none"> • Determining slopes and y-intercepts of lines. • Calculating the slopes of a linear relation given as a table or graph. • Exhibiting conceptual understanding of various uses of variables. 	x-intercept y-intercept slope linear equation slope intercept	ARMT Coach Item Specs. Buckle Down Work Out IXL Website Ladders to Success Glencoe Pre-Algebra	December	February		

Houston County School District
Formative Assessments Pacing Guide for 8th Grade Math Standards

AI COS Standards	Vocabulary	Resources	Date Introduced	Date Tested	% Mastery	Names of Students W/Non-Mastery												
<p>5. Solve problems involving linear functions.</p> <p>ARMT Blueprint:</p> <ul style="list-style-type: none"> Multiple Choice- 3 items Grid- 1 item <p>Additional Minimum Required Content:</p> <ul style="list-style-type: none"> Identifying functions from information in tables sets of ordered pairs, equations, graphs, and mappings. Determining the rule that defines a function. Ex. Given a function table (Rule: $y=4.5x$) <table style="margin-left: 40px;"> <tr> <td style="padding-right: 20px;">Cars Washed</td> <td>Money Made</td> </tr> <tr> <td style="padding-right: 20px;">Input (x)</td> <td>Output (y)</td> </tr> <tr> <td style="padding-right: 20px;">1</td> <td>\$4.50</td> </tr> <tr> <td style="padding-right: 20px;">2</td> <td>\$9.00</td> </tr> <tr> <td style="padding-right: 20px;">3</td> <td>\$13.50</td> </tr> <tr> <td style="padding-right: 20px;">4</td> <td>\$18.00</td> </tr> </table> <ul style="list-style-type: none"> Classifying variables in a function as independent or dependent. Classifying relations as linear or nonlinear by examining tables, graphs, or simple equations. 	Cars Washed	Money Made	Input (x)	Output (y)	1	\$4.50	2	\$9.00	3	\$13.50	4	\$18.00	function vertical line test nonlinear linear rate of change inequalities	ARMT Coach Item Specs. Buckle Down Work Out IXL Website Ladders to Success Glencoe Pre-Algebra	December	February		
Cars Washed	Money Made																	
Input (x)	Output (y)																	
1	\$4.50																	
2	\$9.00																	
3	\$13.50																	
4	\$18.00																	
<p>6. Solve multi-step linear equations, including equations requiring the use of the distributive property.</p> <p>Ex. solving $-3(x-5) - 6x = 2+ 4x$</p> <p>ARMT Blueprint:</p> <ul style="list-style-type: none"> Multiple Choice- 2 items Grid- 2 items 	Distributive property Variables Inequalities	ARMT Coach Item Specs. Buckle Down Work Out IXL Website Ladders to Success Glencoe Pre-Algebra	October	February														

Houston County School District

Formative Assessments Pacing Guide for 8th Grade Math Standards

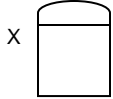
AL COS Standards	Vocabulary	Resources	Date Introduced	Date Tested	% Mastery	Names of Students W/Non-Mastery
Geometry						
<p>7. Solve problems using the Pythagorean Theorem.</p> <p>ARMT Blueprint:</p> <ul style="list-style-type: none"> • Multiple Choice- 2 items • Grid- 1 item • Open-ended- 1 item <p>Additional Minimum Required Content:</p> <ul style="list-style-type: none"> • Applying the Triangle Inequality Theorem. Ex. determining if a triangle can be formed with sides of 1 inch, 2 inches, and 5 inches. • Verifying the Pythagorean Theorem. • Applying the Pythagorean Theorem to determine if a triangle is a right angle. • Applying the Pythagorean Theorem to find the missing length of a side of a right triangle. • Calculating distances on the coordinate plane using the Pythagorean Theorem. 	Pythagorean Theorem Legs Hypotenuse Converse Midpoint Formula Distance Formula	ARMT Coach Item Specs. Buckle Down Work Out IXL Website Ladders to Success Glencoe Pre-Algebra	October	December		

Houston County School District
Formative Assessments Pacing Guide for 8th Grade Math Standards

AL COS Standards	Vocabulary	Resources	Date Introduced	Date Tested	% Mastery	Names of Students W/Non-Mastery
<p>8. Compare quadrilaterals, triangles, and solids using their properties and characteristics.</p> <p>ARMT Blueprint:</p> <ul style="list-style-type: none"> • Multiple Choice- 4 items <p>Additional Minimum Required Content:</p> <ul style="list-style-type: none"> • Developing mathematical arguments about the relationships among types of quadrilaterals and triangles. • Identifying angle bisectors, perpendicular bisectors, congruent angles, and congruent figures. • Constructing congruent and similar polygons, congruent angles, congruent segments, and parallel and perpendicular lines. 	<p>line segment vertex, acute obtuse, right congruent scalene isosceles equilateral similar triangles adjacent polygons parallel perpendicular</p>	<p>ARMT Coach Item Specs. Buckle Down Work Out IXL Website Ladders to Success Glencoe Pre-Algebra</p>	<p>Bell ringer Oct./Nov.</p>	<p>February</p>		

Houston County School District

Formative Assessments Pacing Guide for 8th Grade Math Standards

AL COS Standards	Vocabulary	Resources	Date Introduced	Date Tested	% Mastery	Names of Students W/Non-Mastery
Measurement						
<p>9. Determine the measures of special angle pairs, including adjacent, vertical, supplementary, and complementary angles, and angles formed by parallel lines cut by a transversal.</p> <p>ARMT Blueprint:</p> <ul style="list-style-type: none"> • Multiple Choice- 3 items • Grid- 1 item 	adjacent vertical supplementary supplement complementary complement transversal	ARMT Coach Item Specs. Buckle Down Work Out IXL Website Ladders to Success Glencoe Pre-Algebra	Nov./Dec. Bell ringers	February		
<p>10. Find the perimeter and area of regular and irregular plane figures.</p> <p>Ex. If x represents the length of a side of the square, write expressions that represent the perimeter and area of the figure below.</p> <div style="text-align: center;">  </div> <p>ARMT Blueprint:</p> <ul style="list-style-type: none"> • Multiple Choice- 3 items • Grid- 1 item 	congruent transformations quadrilateral parallelogram triangle, polygon perimeter, area rotation translation reflection	ARMT Coach Item Specs. Buckle Down Work Out IXL Website Ladders to Success Glencoe Pre-Algebra				

Houston County School District
Formative Assessments Pacing Guide for 8th Grade Math Standards

AL COS Standards	Vocabulary	Resources	Date Introduced	Date Tested	% Mastery	Names of Students W/Non-Mastery
<p>11. Determine the surface area and volume of rectangular prisms, cylinders, and pyramids.</p> <p>ARMT Blueprint:</p> <ul style="list-style-type: none"> • Multiple Choice- 3 items • Open-ended- 1 item <p>Additional Minimum Required Content:</p> <ul style="list-style-type: none"> • Estimating surface area and volume of solid figures. • Determining the appropriate units of measure to describe surface area and volume. • Developing formulas for determining surface area and volume of rectangular prisms, cylinders, and pyramids. 	Rectangular prism Pyramid Surface area Volume Cubic units Square units	ARMT Coach Item Specs. Buckle Down Work Out IXL Website Ladders to Success Glencoe Pre-Algebra	January February	February		

Houston County School District
Formative Assessments Pacing Guide for 8th Grade Math Standards

AL COS Standards	Vocabulary	Resources	Date Introduced	Date Tested	% Mastery	Names of Students W/Non-Mastery
<p>12. Determine the length of missing sides and measures of angles in similar and congruent figures.</p> <p>ARMT Blueprint:</p> <ul style="list-style-type: none"> • Multiple Choice- 3 items • Grid- 1 item <p>Additional Minimum Required Content:</p> <ul style="list-style-type: none"> • Applying proportional reasoning. • Using dilations on the coordinate plane to determine measures of similar figures. • Finding the ratios of the perimeters and areas of similar triangles, trapezoids, and parallelograms. 	<p>similar solids perimeter area trapezoid triangle parallelogram proportion</p>	<p>ARMT Coach Item Specs. Buckle Down Work Out IXL Website Ladders to Success Glencoe Pre-Algebra</p>	<p>January February</p>	<p>February</p>		

Houston County School District

Formative Assessments Pacing Guide for 8th Grade Math Standards

AL COS Standards	Vocabulary	Resources	Date Introduced	Date Tested	% Mastery	Names of Students W/Non-Mastery
Data Analysis and Probability						
<p>13. Interpret data from populations, using given and collected data.</p> <p>ARMT Blueprint:</p> <ul style="list-style-type: none"> • Multiple Choice- 3 items • Open-ended- 1 item <p>Additional Minimum Required Content:</p> <ul style="list-style-type: none"> • Representing the data with the most appropriate graph, including box-and-whisker plot, circle graph, and scatter plot. • Making predictions by estimating the line of best fit from a scatter plot. • Comparing data sets involving two populations. • Determining the measure of center that is the most appropriate for a given situation. 	Box-and-Whisker Circle graph Scatter plot Stem-and-Leaf Plot Measures of variation range	ARMT Coach Item Specs. Buckle Down Work Out IXL Website Ladders to Success Glencoe Pre-Algebra	November Bell ringer	December		

Houston County School District
Formative Assessments Pacing Guide for 8th Grade Math Standards

AL COS Standards	Vocabulary	Resources	Date Introduced	Date Tested	% Mastery	Names of Students W/Non-Mastery
<p>14. Determine the theoretical probability of an event.</p> <p>ARMT Blueprint:</p> <ul style="list-style-type: none"> • Multiple Choice- 3 items • Grid- 1 item <p>Additional Minimum Required Content:</p> <ul style="list-style-type: none"> • Calculating the probability of complementary events and mutually exclusive events. • Comparing experimental and theoretical probability. • Computing the probability of two independent events and two dependent events. • Determining the probability of an event through simulation. Ex. Using random numbers to find the probability of a basketball player making six baskets in six attempts if he makes 60 percent of his shots from the court and shoots 20 times during a game. 	<p>outcomes Tree diagram Fundamental Counting Principal</p>	<p>ARMT Coach Item Specs. Buckle Down Work Out IXL Website Ladders to Success Glencoe Pre- Algebra</p>	<p>September</p>	<p>December</p>		