

Houston County School District

Formative Assessments Pacing Guide for 7th Grade Math Standards

AL COS Standards	Vocabulary	Resources	Date Introduced	Date Tested	% Mastery	Names of Students W/Non-Mastery
Number and Operations						
<p>1. Demonstrate computational fluency with addition, subtraction, and multiplication of integers.</p> <p>ARMT Blueprint:</p> <ul style="list-style-type: none"> Multiple Choice- 3 items Grid- 2 items <p>Additional Minimum Required Content:</p> <ul style="list-style-type: none"> Developing algorithms for performing operations on integers. Ex. Determining a systematic set of steps that can be used to subtract integers. Using inverse properties of addition and of multiplication. 	opposites integers Absolute value rational numbers irrational inverse identity, sum product quotient difference properties: zero, identity distributive commutative associative	American Book Co. Passing The 7 th Grade ARMT ARMT Coach Buckle Down Scoring High AMSTI: Accentuate the negative, Variables & Patterns Data Distributions Moving	August	October December		
<p>2. Use order of operations to evaluate numerical 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"> Computing absolute values. Finding square roots of perfect squares through 225. Evaluating powers. Applying properties of operations to compute with integers, fractions, and decimals. 	square root perfect squares radical expression real numbers variable expressions evaluate powers exponent base, order of operations equation solution perimeter, area	American Book Co. Passing The 7 th Grade ARMT ARMT Coach Buckle Down Scoring High AMSTI: Accentuate the Neg. Stretching and Shrinking	Sept.	October December		

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<p>3. Solve problems requiring the use of operations on rational numbers.</p> <p>ARMT Blueprint:</p> <ul style="list-style-type: none"> Multiple Choice- 8 items <p>Additional Minimum Required Content:</p> <ul style="list-style-type: none"> Describing the method used. Determining the reasonableness of results. Using percents to solve problems, including problems involving discounts, taxes, commissions, and simple interest. 	decimal, estimation leading digit compatible numbers Scientific notation metric system, terms prime numbers composite numbers factorization greatest common factor least common multiple relatively prime, fraction annual (interest) rate terminating decimal repeating decimal reciprocal customary units simple interest interest, principal numerator, denominator simplest form mixed number, proper and improper fraction	American Book Co. Passing The 7 th Grade ARMT ARMT Coach Buckle Down Scoring High AMSTI: Accentuate the Neg. Data Data Around Us Comparing/scaling	September	October December		
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<p>4. Express a pattern shown in a table, graph or chart as an algebraic equation.</p> <p>ARMT Blueprint:</p> <ul style="list-style-type: none"> Multiple Choice- 4 items <p>Additional Minimum Required Content:</p>	Coordinate plane x-axis y-axis origin quadrants ordered pairs x-coordinate y-coordinate	American Book Co. Passing The 7 th Grade ARMT ARMT Coach Buckle Down Scoring High AMSTI: Moving Straight	January	February		

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<ul style="list-style-type: none"> • Recognizing the relationships between numerical patterns in tables and their respective graphs in the coordinate plane. Ex. Recognizing the pattern illustrated in both the table and graph as $y=2x$. • Determining if a constant rate of change exists in a pattern. 	scatter plot function input output range domain linear function slope	Ahead Variable and Patterns				
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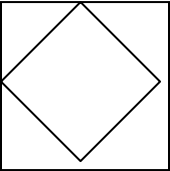
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<p>5. Translate verbal phrases into algebraic expressions and algebraic expressions into verbal phrases.</p> <p>ARMT Blueprint:</p> <ul style="list-style-type: none"> • Multiple Choice- 4 items <p>Additional Minimum Required Content:</p> <ul style="list-style-type: none"> • Exhibiting understanding of a variable as an unknown quantity. 	verbal model variable expression coefficient constant term terms, like terms equivalent variable expressions inverse operations equivalent equations	American Book Co. Passing The 7 th Grade ARMT ARMT Coach Buckle Down Scoring High AMSTI: Moving Straight Ahead Accentuate the Neg.	Jan.	Feb.		
<p>6. Solve one- and two-step equations.</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"> • Solving inequalities in one variable. • Graphing solution sets of inequalities on a number line. • Recognizing properties of equality. 	inequality equivalent inequalities percent equation	American Book Co. Passing The 7 th Grade ARMT ARMT Coach Buckle Down Scoring High AMSTI: Accentuate the Negative	Jan.	Feb.		

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Geometry						
<p>7. Determine the transformation(s), including translations, reflections, or rotations, used to alter the position of a polygon on the coordinate plane.</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"> Determining the type of symmetry (rotational or line) found in a reflection or rotation. Graphing transformations of quadrilaterals on the Cartesian plane by plotting the vertices. Graphing figures which are similar to other figures using dilations. 	transformation translation image reflection-line of rotation- center angle of rotation symmetry-line of rotational tessellation	American Book Co. Passing The 7 th Grade ARMT ARMT Coach Buckle Down Scoring High Stretching and Shrinking	March	February		

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<p>8. Recognize geometric relationships among two-dimensional and three-dimensional objects.</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"> Drawing geometric figures when given specified components, including base and height. Investigating properties and relationships among congruent figures Identifying geometric ideas in settings outside the mathematics classroom. Using networks to represent and solve problems. Ex. Find the number of paths from point A to point B <div style="text-align: center;">  </div>	vertex, ray angle, degrees acute angle right angle straight angle obtuse angle vertical angle congruent plane, parallel perpendicular corresponding angle, triangle, equilateral isosceles, scalene arc, radius Quadrilaterals: square, volume rectangle, trapezoid parallelogram rhombus, polygon similar, hypotenuse legs, prism, pyramid cylinder, cone, sphere solid, faces, edges,	American Book Co. Passing The 7 th Grade ARMT ARMT Coach Buckle Down Scoring High AMSTI: Filling and Wrapping	May January (Bell ringer)	February		

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Measurement						
<p>9. Solve problems involving circumference and area of circles.</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"> • Estimating circumference, diameter, and area. • Determining appropriate units of measure to describe circumference, diameter, and area. • Measuring circumference and diameter using customary and metric units. • Using circumference and diameter to approximate the value of pi. • Identifying pi as an irrational number. • Developing formulas for determining circumference and area. 	<p>circle radius center diameter circumference</p>	<p>American Book Co. Passing The 7th Grade ARMT ARMT Coach Buckle Down Scoring High AMSTI: Variables and Patterns Stretching and Shrinking Moving Straight Ahead Filling and Wrapping</p>	<p>April (August Bell ringers)</p>	<p>December</p>		

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<p>10. Find the perimeter of polygons and the area of triangles and trapezoids.</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"> • Develop formulas for determining perimeter and area of triangles and trapezoids. 	parallelograms base height area perimeter trapezoid triangle	American Book Co. Passing The 7 th Grade ARMT ARMT Coach Buckle Down Scoring High AMSTI: Stretching and Shrinking Filling and Wrapping	April (Bell ringer January)	February		
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<p>11. Solve problems involving ratios or rates, using proportional reasoning.</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"> • Determining the unit rate. • Converting rates from one unit to another. Ex. Determining the number of minutes in three days. • Converting units of length, weight, or capacity from metric to customary and 	ratio equivalent ratio rate unit rate proportion cross products scale scale drawing	American Book Co. Passing The 7 th Grade ARMT ARMT Coach Buckle Down Scoring High	February	February		

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from customary to metric.		AMSTI: Comparing and Scaling				
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Data Analysis and Probability						
<p>12. Determine measures of central tendency (mean, median, and mode) and the range using a given set of data or graphs, including histograms, frequency tables, and stem-and-leaf plots.</p> <p>ARMT Blueprint:</p> <ul style="list-style-type: none"> • Multiple Choice- 2 items • Grid- 2 items • Open-ended- 1 item <p>Additional Minimum Required Content:</p> <ul style="list-style-type: none"> • Creating histograms 	mean median mode range bar graph stem-leaf box- whiskers quartile extremes histograms frequency frequency table data circle graph	American Book Co. Passing The 7 th Grade ARMT ARMT Coach Buckle Down Scoring High AMSTI: Data Distributions				

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<p>13. Determine the probability of a compound event.</p> <p>Ex. Finding the probability of selecting at random a hamburger and lemonade when choosing a sandwich and drink from two sandwich choices and three drink choices.</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"> • Representing outcomes as a list, chart, picture, or tree diagram. • Determining the number of possible outcomes by using the fundamental counting principle or other techniques. • Modeling the probability of event through simulations with random numbers. Ex. Determining the probability of a baby being a boy by generating random numbers, using a number cube with odd numbers representing a boy, to simulate the outcomes. 	Probability outcomes event favorable outcomes theoretical probability tree diagrams permutations combinations disjoint events overlapping events independent events dependent events	American Book Co. Passing The 7 th Grade ARMT ARMT Coach Buckle Down Scoring High AMSTI: What Do You Expect	May (September Bell Ringers)	December		