

**School District U-46  
Seventh Grade Mathematics**

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<b>Obj.</b>	<b>Student &amp; Parent</b>	<b>ILS Standards</b>	<b>Teacher Clarification</b> <i>Based on the Illinois Mathematics Assessment Framework</i>	<b>*Cycle</b>	<b>**Assessment</b>	<b>Strategies/Resources</b>
701	<p>I can read, write, and represent numbers in various ways.</p> <p>I can order and compare numbers.</p>	<p><b>Representations and Ordering</b></p> <p><b>6.A</b> Demonstrate knowledge and use of numbers and their representations in theoretical and practical settings.</p> <p><b>***English Language Proficiency Standards</b> <i>Grade Level Cluster 6-8</i></p> <p>3. <i>Reading 1-5</i> 3. <i>Writing 1-5</i> 3. <i>Speaking 1-5</i> 3. <i>Listening 1-5</i></p>	<p><b>I model and provide students with the opportunity to:</b></p> <p><b>6.7.01</b> - Read, write, and recognize equivalent representations of positive powers of 10.</p> <p><b>6.7.02</b> – Read, write, recognize, model, and interpret integers, including translating numerical expressions.</p> <p><b>6.7.03</b> – Recognize, translate between, and apply multiple representations of rational numbers (decimals, fractions, mixed numbers, and percents less than 100%).</p> <p><b>6.7.04</b> – Represent repeated factors using.</p> <p><b>6.7.05</b> – Order and compare integers, terminating decimals, fractions and mixed numbers.</p> <p><b>6.7.06</b> – Identify and locate integers, decimals and fractions/mixed numbers and estimate the locations of the square roots.</p> <p><b>6.7.07</b> – Solve problems involving description of numbers, including characteristics and relationships (e.g. square numbers).</p>	<p>Seventh Grade Pacing Guide</p> <p>1<sup>st</sup> Quarter</p>	<p><u>NWEA MAP</u> Number Sense &amp; Numeration</p> <p>District Quarter 1 Assessment</p> <p>ISAT/IMAGE</p>	<p><b>Staff Development</b></p> <p><b>Strategies/Resources</b> <a href="#">ISBE Assessment Framework</a></p>

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702	I can use the relationships between numbers to solve problems.	<p><b>Computation, Operations, Estimation, and Properties</b></p> <p><b>6.B</b> Investigate, represent and solve problems using number facts, operations and their properties, algorithms and relationships and</p> <p><b>6.C</b> Compute and estimate using mental mathematics, paper-and-pencil methods, calculators and computers.</p> <p><b>***English Language Proficiency Standards</b> <i>Grade Level Cluster 6-8</i> 3. Reading 1-5 3. Writing 1-5 3. Speaking 1-5 3. Listening 1-5</p>	<p><b>I model and provide students with the opportunity to:</b></p> <p><b>6.7.08</b> – Solve problems and numbers sentences involving addition, subtraction, multiplication, and division using integers.</p> <p><b>6.7.09</b> – Identify and apply order of operations to simplify numeric expressions involving whole numbers (including exponents), fractions and decimals.</p> <p><b>6.7.10</b> – Identify and apply the properties of operations with rational numbers.</p> <p><b>6.7.11-</b> Demonstrate and apply the relationships between addition/subtraction and multiplication/division with rational numbers.</p> <p><b>6.7.12</b> – Make estimates appropriate to a given situation and analyze what effect the estimation method used has on the accuracy of results.</p> <p><b>6.7.13</b> – Estimate the square root of a number less than 1,000 between two whole numbers (e.g., <math>\sqrt{41}</math> is between 6 and 7).</p>	See Seventh Grade Pacing Guide  1 <sup>st</sup> Quarter	<p><u>NWEA MAP</u> – Computation &amp; Problem Solving</p> <p>District Quarter 1 Assessment</p> <p>ISAT/IMAGE</p>	<p><b>Staff Development</b></p> <p><b>Strategies/Resources</b> <a href="#">ISBE Assessment Framework</a></p>

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703	I can use ratios and proportions to solve problems.	<b>Ratios, Proportions, and Percents</b>  <b>6.D</b> Solve problems using comparison of quantities, ratios, proportions and percents.  <b>***English Language Proficiency Standards</b> <i>Grade Level Cluster 6-8</i> 3. Reading 1-5 3. Writing 1-5 3. Speaking 1-5 3. Listening 1-5	<b>I model and provide students with the opportunity to:</b>  <b>6.7.14</b> – Create and explain ratios that represent a given situation.  <b>6.7.15</b> – Use proportional reasoning to model and solve problems.  <b>6.7.16</b> – Read, write, recognize, model and interpret percents from 0% to 100%.  <b>6.7.17</b> – Solve number sentences and problems involving fractions, decimals and percents (e.g., 50% of 10 is the same as 1/2 , sales tax, tips, interest, discounts).	See Seventh Grade Pacing Guide  1 <sup>st</sup> Quarter	<u>NWEA MAP</u> Number Sense & Numeration  Problem Solving  District Quarter 1 Assessment  ISAT/IMAGE	<b>Staff Development</b>  <b>Strategies/Resources</b> <a href="#">ISBE Assessment Framework</a>

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704	I can use appropriate units of measure, estimate measurements and use appropriate formulas and instruments to solve problems.	<p><b>Units, tools, estimation, and applications.</b></p> <p><b>7.A</b> Measure and compare quantities using appropriate units, instruments and methods.</p> <p style="text-align: center;">and</p> <p><b>7.B</b> estimate measurements and determine acceptable levels of accuracy</p> <p style="text-align: center;">and</p> <p><b>7.C</b> Select and use appropriate technology, instruments and formulas to solve problems, interpret results and communicate.</p> <p><b>***English Language Proficiency Standards</b> <i>Grade Level Cluster 6-8</i></p> <p>3. <i>Reading 1-5</i></p> <p>3. <i>Writing 1-5</i></p> <p>3. <i>Speaking 1-5</i></p> <p>3. <i>Listening 1-5</i></p>	<p><b>I model and provide students with the opportunity to:</b></p> <p><b>7.7.01</b> – Select and use appropriate standard units and tools to measure length, mass/weight capacity and angles. Sketch with given specifications, line segments, angles, triangles and quadrilaterals.</p> <p><b>7.7.02</b> – Solve problems involving the perimeter and area of polygons and composite figures using diagrams, models and grids or by using given formulas (may include sketching from its description).</p> <p><b>7.7.03</b> – Compare and estimate length (including perimeter), area, volume, weight/mass and angles (0° to 180°) using referents.</p> <p><b>7.7.04</b> – Determine the volume and surface area of a right rectangular prism using an appropriate formula or strategy.</p> <p><b>7.7.05</b>- Solve problems involving unit conversions <u>within the same measurement system</u> for length, weight/mass, capacity and square units (e.g., 1ft<sup>2</sup> = 144in<sup>2</sup>).</p> <p><b>7.7.06</b> – Solve problems involving scale drawings and maps.</p>	<p>See Seventh Grade Pacing Guide</p> <p style="text-align: center;">3<sup>rd</sup> Quarter &amp; To be Coordinated with the Science Department</p>	<p><u>NWEA MAP</u> Measurement &amp; Geometry</p> <p>District Quarter 3 Assessment</p> <p>ISAT/IMAGE</p>	<p><b>Staff Development</b></p> <p><b>Strategies/Resources</b> <a href="#">ISBE Assessment Framework</a></p>

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<b>705</b>	I can recognize patterns, write and simplify expressions, and evaluate algebraic expressions.	<b>Representations, Patterns, and Expressions</b>  <b>8.A</b> Describe numerical relationships using variables and patterns.  <b>***English Language Proficiency Standards</b> <i>Grade Level Cluster 6-8</i> 3. Reading 1-5 3. Writing 1-5 3. Speaking 1-5 3. Listening 1-5	<b>I model and provide students with the opportunity to:</b>  <b>8.7.01</b> – Determine a missing term in a sequence, extend a sentence, and construct and identify a rule that can generate the terms of an arithmetic or geometric sequence.  <b>8.7.02</b> – Write an expression using variables to represent unknown quantities.  <b>8.7.03</b> – Simplify algebraic expressions by identifying and combining like terms.  <b>8.7.04</b> – Recognize equivalent forms of algebraic expressions.  <b>8.7.05</b> – Evaluate or simplify algebraic expressions with one or more integer variable values (e.g., $a^2 + b$ for $a = 3$ and $b = -4$ ).	See Seventh Grade Pacing Guide  2 <sup>nd</sup> Quarter	<u>NWEA MAP</u> Algebraic Concepts  District Quarter 2 Assessment  ISAT/IMAGE	<b>Staff Development</b>  <b>Strategies/Resources</b> <a href="#">ISBE Assessment Framework</a>
<b>706</b>	I can interpret and describe numerical relationships using tables, graphs, and symbols.	<b>Connections using tables, graphs, and symbol.</b>  <b>8.B</b> Interpret and describe numerical relationships using tables, graphs and symbols.  <b>***English Language Proficiency Standards</b> <i>Grade Level Cluster 6-8</i> 3. Reading 1-5 3. Writing 1-5 3. Speaking 1-5 3. Listening 1-5	<b>I model and provide students with the opportunity to:</b>  <b>8.7.06</b> – Determine how a change in one variable relates to a change in a second variable.  <b>8.7.07</b> – Represent linear equations and quantitative relationships coordinate system and interpret the meaning of a specific part of a graph.  <b>8.7.08</b> – Translate between different representations (table, written, graphical or pictorial) of whole number relationships and linear expressions.  <b>8.7.09</b> – Identify, graph and interpret inequalities on a number line.	See Seventh Grade Pacing Guide  2 <sup>nd</sup> Quarter	<u>NWEA MAP</u> Algebraic Concepts  District Quarter 2 Assessment  ISAT/IMAGE	<b>Staff Development</b>  <b>Strategies/Resources</b> <a href="#">ISBE Assessment Framework</a>

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707	I am able to interpret and solve problems by writing and solving equations and inequalities.	<p><b>Writing, interpreting and solving equations and inequalities</b></p> <p><b>8.C</b> Solve problems using systems of numbers and their properties.</p> <p>and</p> <p><b>8.D</b> Use algebraic concepts and procedures to represent and solve problems.</p> <p><b>***English Language Proficiency Standards</b> <i>Grade Level Cluster 6-8</i></p> <p>3. Reading 1-5 3. Writing 1-5 3. Speaking 1-5 3. Listening 1-5</p>	<p><b>I model and provide students with the opportunity to:</b></p> <p><b>8.7.10</b> – Represent and analyze problems with linear equations and inequalities.</p> <p><b>8.7.11</b> – Solve linear equations in one variable (e.g., <math>2x + = 13</math>) and inequalities involving <math>&lt;</math> or <math>&gt;</math> (e.g., <math>2x &lt; 6</math>, <math>x + 7 &gt; 10</math>).</p> <p><b>8.7.12</b> – Solve word problems involving unknown quantities.</p>	See Seventh Grade Pacing Guide  2 <sup>nd</sup> Quarter	<p><u>NWEA MAP</u> Algebraic Concepts &amp; Problem Solving</p> <p>District Quarter 2 &amp; 4 Assessment</p> <p>ISAT/IMAGE</p>	<p><b>Staff Development</b></p> <p><b>Strategies/Resources</b> <a href="#">ISBE Assessment Framework</a></p>

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708	I am able to interpret and solve problems using the properties of geometric figures and coordinate geometry.	<p><b>Properties of single figures and coordinate geometry</b></p> <p><b>9.A</b> Demonstrate and apply geometric concepts involving points, lines, planes.</p> <p><b>***English Language Proficiency Standards</b> <i>Grade Level Cluster 6-8</i></p> <p>3. <i>Reading 1-5</i> 3. <i>Writing 1-5</i> 3. <i>Speaking 1-5</i> 3. <i>Listening 1-5</i></p>	<p><b>I model and provide students with the opportunity to:</b></p> <p><b>9.7.01</b> – Classify, describe and sketch regular and irregular two-dimensional shapes according to the number of sides, length of sides, number of vertices and interior angles.</p> <p><b>9.7.02</b> – Solve problems involving two- and three- dimensional shapes.</p> <p><b>9.7.03</b> – Solve problems using properties of triangles and quadrilaterals (e.g., opposite sides of a parallelogram are congruent).</p> <p><b>9.7.04</b> – Identify, describe and determine the radius and diameter of a circle.</p> <p><b>9.7.05</b> – Graph points and identify coordinates of points on the Cartesian coordinate plane (all four quadrants).</p> <p><b>9.7.06</b> – Represent and identify geometric figures using coordinate geometry.</p> <p><b>9.7.07</b> – Analyze the results of a combination of transformations.</p> <p><b>9.7.08</b> – Identify or analyze relationships of angles formed by intersecting lines.</p> <p><b>9.7.09</b> – Identify and sketch acute, obtuse, and right angles.</p> <p><b>9.7.10</b> – Solve problems involving complementary and supplementary angles.</p>	See Seventh Grade Pacing Guide  3 <sup>rd</sup> Quarter	<p><u>NWEA MAP</u> Geometry</p> <p>District Quarter 3 Assessment</p> <p>ISAT/IMAGE</p>	<p><b>Staff Development</b></p> <p><b>Strategies/Resources</b> <a href="#">ISBE Assessment Framework</a></p>

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<b>709</b>	I am able to identify the relationships between and among multiple geometric figures and solve problems involving congruent and similar figures.	<b>Relationships between and among multiple figures.</b>  <b>9.B</b> Identify, describe, classify and compare relationships using points, lines, planes and solids.  <b>***English Language Proficiency Standards</b> <i>Grade Level Cluster 6-8</i> 3. Reading 1-5 3. Writing 1-5 3. Speaking 1-5 3. Listening 1-5	<b>I model and provide students with the opportunity to:</b>  <b>9.7.11</b> – Identify a three-dimensional object from its net.  <b>9.7.12</b> – Recognize which attributes (such as shape, perimeter and area) change or don't change when plane figures are composed, decomposed or rearranged.  <b>9.7.13</b> – Describe the difference between congruence and similarity.  <b>9.7.14</b> – Determine if figures are similar and identify relationships between corresponding parts of similar figures.  <b>9.7.15</b> – Determine the distance between two points on a horizontal or vertical number line.	See Seventh Grade Pacing Guide  3 <sup>rd</sup> Quarter	<u>NWEA MAP</u> Geometry  District Quarter 3 Assessment  ISAT/IMAGE	<b>Staff Development</b>  <b>Strategies/Resources</b> <a href="#">ISBE Assessment Framework</a>
<b>710</b>	I can provide logical justifications.	<b>9.C</b> Construct convincing arguments and proofs to solve problems.  <b>***English Language Proficiency Standards</b> <i>Grade Level Cluster 6-8</i> 3. Reading 1-5 3. Writing 1-5 3. Speaking 1-5 3. Listening 1-5	<i>This standard is not practiced in isolation. It is addressed through problems that require this type of thinking.</i>	See Seventh Grade Pacing Guide  Ongoing	<u>NWEA MAP</u> Problem Solving  ISAT/IMAGE	<b>Staff Development</b>  <b>Strategies/Resources</b> <a href="#">ISBE Assessment Framework</a>

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711	I can read, interpret and create displays of data and I can describe and analyze data.	<p><b>Data Analysis and Statistics</b></p> <p><b>10.A</b> Organize, describe and make predictions from existing data.</p> <p style="text-align: center;">and</p> <p><b>10.B</b> Formulate questions, design data collection methods, gather and analyze data and communicate findings.</p> <p><b>***English Language Proficiency Standards</b> <i>Grade Level Cluster 6-8</i></p> <p>3. <i>Reading 1-5</i></p> <p>3. <i>Writing 1-5</i></p> <p>3. <i>Speaking 1-5</i></p> <p>3. <i>Listening 1-5</i></p>	<p><b>I model and provide students with the opportunity to:</b></p> <p><b>10.7.01</b> – Read, interpret and make predictions from data represented in a line (dot) plot, Venn diagram (with two circles), chart/table, line graph, scatter plot, circle graph or histogram.</p> <p><b>10.7.02</b> – Compare different representations of the same data.</p> <p><b>10.7.03</b> – Create a bar graph, chart/table, line graph or circle graph for a given set of data.</p> <p><b>10.7.04</b> – Identify a reasonable approximation of the line of best fit from a set of data or scatter plot.</p> <p><b>10.7.05</b> – Determine and use the mode, range, median mean to interpret data.</p>	See Seventh Grade Pacing Guide  4 <sup>th</sup> Quarter	<p><u>NWEA MAP</u> Statistics, Probability &amp; Graphs</p> <p>District Quarter 4 Assessment</p> <p>ISAT/IMAGE</p>	<p><b>Staff Development</b></p> <p><b>Strategies/Resources</b> <a href="#">ISBE Assessment Framework</a></p>
712	I can use the properties of probability.	<p><b>Probability</b></p> <p><b>10.C</b> Determine, describe, and apply the probabilities of events.</p> <p><b>***English Language Proficiency Standards</b> <i>Grade Level Cluster 6-8</i></p> <p>3. <i>Reading 1-5</i></p> <p>3. <i>Writing 1-5</i></p> <p>3. <i>Speaking 1-5</i></p> <p>3. <i>Listening 1-5</i></p>	<p><b>I model and provide students with the opportunity to:</b></p> <p><b>10.7.06</b> – Solve problems involving the probability of a simple compound event, including representing the probability as a fraction, decimal or percent.</p> <p><b>10.7.07</b> – Represent all possible outcomes for simple events.</p> <p><b>10.7.08</b> – Solve simple problems involving the number of ways objects can be arranged (permutations and combinations).</p>	See Seventh Grade Pacing Guide  4 <sup>th</sup> Quarter	<p><u>NWEA MAP</u> Statistics, Probability &amp; Graphing</p> <p>District Quarter 4 Assessment</p> <p>ISAT/IMAGE</p>	<p><b>Staff Development</b></p> <p><b>Strategies/Resources</b> <a href="#">ISBE Assessment Framework</a></p>