

***GRADE 7***  
***MATHEMATICS***  
***GLEs***  
***Color Coded***

**GLE content to be taught and *tested* in Grade 7 Math in 2012-13 and 2013-14**

| GLE #  | Grade-Level Expectation Text                                                                                                                                                                       | Aligned CCSS          |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| M.7.1  | Recognize and compute equivalent representations of fractions, decimals, and percents (i.e., halves, thirds, fourths, fifths, eighths, tenths, hundredths)                                         | 7.EE.3<br>7.NS.2      |
| M.7.2  | Compare positive fractions, decimals, percents, and integers using symbols (i.e., $<$ , $\leq$ , $=$ , $\geq$ , $>$ ) and position on a number line                                                | Retained <sup>1</sup> |
| M.7.3  | Solve order of operations problems involving grouping symbols and multiple operations                                                                                                              | Retained <sup>1</sup> |
| M.7.5  | Multiply and divide positive fractions and decimals                                                                                                                                                | 7.NS.2                |
| M.7.7  | Select and discuss appropriate operations and solve single- and multi-step, real-life problems involving positive fractions, percents, mixed numbers, decimals, and positive and negative integers | 7.RP.3                |
| M.7.8  | Determine the reasonableness of answers involving positive fractions and decimals by comparing them to estimates                                                                                   | 7.EE.3                |
| M.7.10 | Determine and apply rates and ratios                                                                                                                                                               | 7.RP.1<br>7.RP.3      |
| M.7.11 | Use proportions involving whole numbers to solve real-life problems                                                                                                                                | 7.RP.2<br>7.RP.3      |
| M.7.12 | Evaluate algebraic expressions containing exponents (especially 2 and 3) and square roots, using substitution                                                                                      | Retained <sup>1</sup> |
| M.7.16 | Solve one- and two-step equations and inequalities (with one variable) in multiple ways                                                                                                            | 7.EE.4                |
| M.7.18 | Describe linear, multiplicative, or changing growth relationships (e.g., 1, 3, 6, 10, 15, 21,...) verbally and algebraically                                                                       | 7.RP.2                |
| M.7.20 | Determine the perimeter and area of composite plane figures by subdivision and area addition                                                                                                       | 7.G.6                 |
| M.7.24 | Identify and draw angles (using protractors), circles, diameters, radii, altitudes, and 2-dimensional figures with given specifications                                                            | 7.G.2                 |
| M.7.28 | Determine the radius, diameter, circumference, and area of a circle and apply these measures in real-life problems                                                                                 | 7.G.4                 |
| M.7.29 | Plot points on a coordinate grid in all 4 quadrants and locate the coordinates of a missing vertex in a parallelogram                                                                              | Retained <sup>1</sup> |
| M.7.37 | Determine probability from experiments and from data displayed in tables and graphs                                                                                                                | 7.SP.6<br>7.SP.7      |
| M.7.38 | Compare theoretical and experimental probability in real-life situations                                                                                                                           | 7.SP.7                |

<sup>1</sup> This GLE was moved to another grade but will be taught and tested in this grade to decrease the possibility that the transition will create curricular gaps.

| <b><i>CSS and extended CCSS content (highlighted) taught but <span style="color: red;">not tested</span> in 2012-13 and 2013-14</i></b>  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                               |
|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| <b>CCSS #</b>                                                                                                                            | <b>Common Core State Standard Text</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Year to be Implemented</b> |
| 7.EE.2                                                                                                                                   | Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. <i>For example, <math>a + 0.05a = 1.05a</math> means that “increase by 5%” is the same as “multiply by 1.05.”</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2012-13                       |
| 7.EE.3                                                                                                                                   | Solve multi-step real-life and mathematical problems posed <b>with positive and negative rational numbers in any form</b> (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. <i>For example: If a woman making \$25 an hour gets a 10% raise, she will make an additional <math>\frac{1}{10}</math> of her salary an hour, or \$2.50, for a new salary of \$27.50. If you want to place a towel bar <math>9\frac{3}{4}</math> inches long in the center of a door that is <math>27\frac{1}{2}</math> inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.<sup>2</sup></i> | 2012-13                       |
| 7.EE.4                                                                                                                                   | <b>Use variables to represent quantities in a real-world or mathematical problem</b> , and construct simple equations and inequalities to solve problems by reasoning about the quantities.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2012-13                       |
| 7.G.1                                                                                                                                    | Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2012-13                       |
| 7.G.3                                                                                                                                    | Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2012-13                       |
| 7.G.4                                                                                                                                    | Know the formulas for the area and circumference of a circle and use them to solve problems; <b>give an informal derivation of the relationship between the circumference and area of a circle.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2012-13                       |
| 7.G.5                                                                                                                                    | Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2012-13                       |
| 7.G.6                                                                                                                                    | Solve real-world and mathematical problems involving area, <b>volume and surface area</b> of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2012-13                       |
| 7.NS.1                                                                                                                                   | Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2012-13                       |
| 7.NS.2                                                                                                                                   | Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide <b>rational numbers.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2012-13                       |
| <b><i>CCSS and extended CCSS content (highlighted) taught but <span style="color: red;">not tested</span> in 2012-13 and 2013-14</i></b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                               |

<sup>2</sup> The highlighted CCSS match GLEs, but the highlighted CCSS content goes beyond the GLEs and will be added to the curriculum in the year shown.

|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 7.SP.6 | <b>Approximate</b> the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and <b>predict</b> the approximate relative frequency given the probability. <i>For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.</i>                                                                                                                              | 2012-13 |
| 7.NS.3 | Solve real-world and mathematical problems involving the four operations with rational numbers.                                                                                                                                                                                                                                                                                                                                                                                                                                | 2013-14 |
| 7.SP.1 | Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.                                                                                                                                                                               | 2013-14 |
| 7.SP.2 | Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. <i>For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.</i>                                              | 2013-14 |
| 7.SP.3 | Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. <i>For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable.</i> | 2013-14 |
| 7.SP.4 | Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. <i>For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.</i>                                                                                                                                                                                            | 2013-14 |
| 7.SP.5 | Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.                                                                                                                                                          | 2013-14 |

**Underlined** – Will be moved to another grade, but will be taught and tested in this grade to decrease possibility of gaps

**Gray Font** - Not incorporated until 2013 – 2014

**Ratio, Proportion, and Algebra** – 60% of iLEAP (GLE #s: 3, 10, 11, 12, 16, 18)

**Number Systems** – 25% of iLEAP (GLE #s: 1, 2, 5, 7, 8)

**Measurement, Data, and Geometry** – 15% of iLEAP (GLE #s: 20, 24, 28, 29, 37, 38)

**Not Tested until 2014 – 2015**