

## Virginia Standards of Learning, Grade 6, Correlated to Glencoe Mathematics: Applications and Concepts, Course 1

Lessons in which the standard is the primary focus are indicated in **bold**.

Standards of Learning		Student Edition Lesson(s)
<b>Strand: Number and Number Sense</b>		
<b>6.1</b>	The student will identify representations of a given percent and describe orally and in writing the equivalence relationships among fractions, decimals, and percents.	5-2, 5-3, <b>5-6, 5-7, 10-4, 10-5, 10-6, 10-7, 10-8</b>
<b>6.2</b>	The student will describe and compare two sets of data, using ratios, and will use appropriate notations, such as $a/b$ , $a$ to $b$ , and $a:b$ .	<b>10-1, 10-2, 10-3, 10-3b</b>
<b>6.3</b>	The student will	
	a) find common multiples and factors, including least common multiple and greatest common factor;	1-3, <b>5-1, 5-2a, 5-2, 5-4, 5-5, 6-4a, 6-4, 6-5, 6-6, 7-2a, 7-2, 7-3, 7-4a, 7-4, 7-5</b>
	b) identify and describe prime and composite numbers; and	<b>1-2, 1-3</b>
	c) identify and describe the characteristics of even and odd integers.	<b>1-2</b>
<b>6.4</b>	The student will compare and order whole numbers, fractions, and decimals, using concrete materials, drawings or pictures, and mathematical symbols.	<b>PS2, 3-2, 5-5</b>
<b>6.5</b>	The student will identify, represent, order, and compare integers.	<b>8-1</b>
<b>Strand: Computation and Estimation</b>		
<b>6.6</b>	The student will	
	a) solve problems that involve addition, subtraction, multiplication, and/or division with fractions and mixed numbers, with and without regrouping, that include like and unlike denominators of 12 or less, and express their answers in simplest form; and	<b>6-3, 6-4a, 6-4, 6-5, 6-6, 7-2a, 7-2, 7-3, 7-4a, 7-4, 7-5</b>
	b) find the quotient, given a dividend expressed as a decimal through thousandths and a divisor expressed as a decimal to thousandths with exactly one non-zero digit.	<b>4-4a, 4-4</b>
<b>6.7</b>	The student will use estimation strategies to solve multistep practical problems involving whole numbers, decimals, and fractions (rational numbers).	1-1, 1-7a, <b>3-4, 3-5b, 6-2, 7-1</b>
<b>6.8</b>	The student will solve multistep consumer-application problems involving fractions and decimals and present data and conclusions in paragraphs, tables, or graphs. Planning a budget will be included.	3-4, 3-5, 4-1, 4-3, 4-6b, 6-2, 6-2b
<b>Strand: Measurement</b>		
<b>6.9</b>	The student will compare and convert units of measure for length, area, weight/mass, and volume within the U.S. Customary system and the metric system and estimate conversions between units in each system:	
	a) length — part of an inch ( $\frac{1}{2}$ , $\frac{1}{4}$ , and $\frac{1}{8}$ ), inches, feet, yards, miles, millimeters, centimeters, meters, and kilometers;	<b>12-1, 12-2, 12-3, 12-4, 12-5</b>
	b) weight/mass — ounces, pounds, tons, grams, and kilograms;	<b>12-2, 12-4, 12-5</b>
	c) liquid volume — cups, pints, quarts, gallons, milliliters, and liters; and	<b>12-2, 12-4, 12-5</b>
	d) area — square units. * * <i>The intent of this standard is for students to make ballpark comparisons and not to memorize conversion factors between U.S. Customary and metric units.</i>	14-2

Standards of Learning		Student Edition Lesson(s)
6.10	The student will estimate and then determine length, weight/mass, area, and liquid volume/capacity, using standard and nonstandard units of measure.	7-1, 12-1, 12-2, 12-3, <b>12-4</b> , 14-1, 14-2, <b>14-3</b> , 14-5
6.11	The student will determine if a problem situation involving polygons of four or fewer sides represents the application of perimeter or area and apply the appropriate formula.	1-8, 4-5, 12-1b, 14-1, 14-2
6.12	The student will	
	a) solve problems involving the circumference and/or area of a circle when given the diameter or radius; and	<b>4-6, 14-3</b>
	b) derive approximations for pi ( $\pi$ ) from measurements for circumference and diameter, using concrete materials or computer models.	<b>4-6</b>
6.13	The student will	
	a) estimate angle measures, using $45^\circ$ , $90^\circ$ , and $180^\circ$ as referents, and use the appropriate tools to measure the given angles; and	13-1, <b>13-2</b>
	b) measure and draw right, acute, and obtuse angles and triangles.	<b>13-1, 13-4b</b>
<b>Strand: Geometry</b>		
6.14	The student will identify, classify, and describe the characteristics of plane figures, describing their similarities, differences, and defining properties.	<b>13-4</b>
6.15	The student will determine congruence of segments, angles, and polygons by direct comparison, given their attributes. Examples of noncongruent and congruent figures will be included.	<b>13-3a</b> , 13-3, 13-4, <b>13-6</b>
6.16	The student will construct the perpendicular bisector of a line segment and an angle bisector.	<b>13-3</b>
6.17	The student will sketch, construct models of, and classify solid figures (rectangular prism, cone, cylinder, and pyramid).	<b>14-4, 14-4b</b>
<b>Strand: Probability and Statistics</b>		
6.18	The student, given a problem situation, will collect, analyze, display, and interpret data in a variety of graphical methods, including	
	a) line, bar, and circle graphs, (Circle graphs will be limited to halves, fourths, and eighths);	<b>2-1</b> , 2-2a, <b>2-2</b> , <b>2-3</b> , 2-4, 2-8
	b) stem-and-leaf plots; and	<b>2-5</b>
	c) box-and-whisker plots.	<b>2-7b</b>
6.19	The student will describe the mean, median, and mode as measures of central tendency, describe the range, and determine their meaning for a set of data.	<b>2-6</b> , 2-6b, <b>2-7</b> , 2-8
6.20	The student will	
	a) make a sample space for selected experiments and represent it in the form of a list, chart, picture, or tree diagram; and	11-1a, 11-1, <b>11-2</b> , 11-5a, 11-5
	b) determine and interpret the probability of an event occurring from a given sample space and represent the probability as a ratio, decimal or percent, as appropriate for the given situation.	11-1a, <b>11-1</b> , 11-1b, 11-2, <b>11-4</b> , 11-5a, <b>11-5</b>
<b>Strand: Patterns, Functions, and Algebra</b>		
6.21	The student will investigate, describe, and extend numerical and geometric patterns, including triangular numbers, patterns formed by powers of 10, and arithmetic sequences.	1-1, 1-2, 1-7a, 1-4, 3-5b, <b>7-6a</b> , <b>7-6</b> , 9-6, 14-5a

Standards of Learning		Student Edition Lesson(s)
<b>6.22</b>	The student will investigate and describe concepts of positive exponents, perfect squares, square roots, and, for numbers greater than 10, scientific notation. Calculators will be used to develop exponential patterns.	<b>1-4, 4-1</b>
<b>6.23</b>	The student will	
	a) model and solve algebraic equations, using concrete materials;	<b>1-7, 9-2a, 9-2, 9-3a, 9-3, 9-4, 9-5</b>
	b) solve one-step linear equations in one variable, involving whole number coefficients and positive rational solutions; and	<b>1-7, 9-2, 9-3, 9-4, 9-5</b>
	c) use the following algebraic terms appropriately: <i>variable</i> , <i>coefficient</i> , <i>term</i> , and <i>equation</i> .	<b>1-6, 1-7, 9-4</b>