**Virginia Mathematics Standards of Learning Tracking Log**

**Bridging from Grade 8 to Algebra I**

The skills and strategies introduced in the Mathematics Standards of Learning vertically articulate from kindergarten to high school and many standards build in complexity within K-12 instruction. Teachers can use this tracker to help determine which standards students have had sufficient exposure and experience during the previous school year to make decisions regarding when and how experience with new standards might occur in the current school year.

|  | **Addressed during previous school year** | **Not Addressed/ Insufficient Exposure during previous school year** | **Subsequent Grade/Course****Connections** | **Comments** |
| --- | --- | --- | --- | --- |
| 8.1 The student will compare and order real numbers. |  |  | A.5a |  |
| 8.2 The student will describe the relationships between the subsets of the real number system. |  |  | − |  |
| 8.3a The student will estimate and determine the two consecutive integers between which a square root lies; and  |  |  | A.3abc; A.4b |  |
| 8.3b The student will determine both the positive and negative square roots of a given perfect square. |  |  | A.3abc; A.4b |  |
| 8.4 The student will solve practical problems involving consumer applications.  |  |  | − |  |
| 8.5 The student will use the relationships among pairs of angles that are vertical angles, adjacent angles, supplementary angles, and complementary angles to determine the measure of unknown angles. |  |  | − |  |
| 8.6a The student will solve problems, including practical problems, involving volume and surface area of cones and square-based pyramids; and |  |  | − |  |
| 8.6b The student will describe how changing one measured attribute of a rectangular prism affects the volume and surface area. |  |  | − |  |
| 8.7a The student will given a polygon, apply transformations, to include translations, reflections, and dilations, in the coordinate plane; and |  |  | − |  |
| 8.7b The student will identify practical applications of transformations. |  |  | − |  |
| 8.8 The student will construct a three-dimensional model, given the top or bottom, side, and front views. |  |  | − |  |
| 8.9a The student will verify the Pythagorean Theorem; and |  |  | − |  |
| 8.9b The student will apply the Pythagorean Theorem. |  |  | A.3a; A.4b |  |
| 8.10 The student will solve area and perimeter problems, including practical problems, involving composite plane figures. |  |  | − |  |
| 8.11a The student will compare and contrast the probability of independent and dependent events; and  |  |  | − |  |
| 8.11b The student will determine probabilities for independent and dependent events.  |  |  | − |  |
| 8.12a The student will represent numerical data in boxplots;  |  |  | − |  |
| 8.12b The student will make observations and inferences about data represented in boxplots; and |  |  | − |  |
| 8.12c The student will compare and analyze two data sets using boxplots. |  |  | − |  |
| 8.13a The student will represent data in scatterplots;  |  |  | A.9 |  |
| 8.13b The student will make observations about data represented in scatterplots; and |  |  | A.9 |  |
| 8.13c The student will use a drawing to estimate the line of best fit for data represented in a scatterplot. |  |  | A.9 |  |
| 8.14a The student will evaluate an algebraic expression for given replacement values of the variables; and |  |  | A.1b; A.2abc; A.3ac; A.6a; A.7e; A.9 |  |
| 8.14b The student will simplify algebraic expressions in one variable. |  |  | A.2ac; A.4ac; A.5a; A.6a |  |
| 8.15a The student will determine whether a given relation is a function; and  |  |  | A.7a |  |
| 8.15b The student will determine the domain and range of a function. |  |  | A.7ab |  |
| 8.16a The student will recognize and describe the graph of a linear function with a slope that is positive, negative, or zero; |  |  | A.9 |  |
| 8.16b The student will identify the slope and *y*-intercept of a linear function, given a table of values, a graph, or an equation in *y* = *mx* + *b* form; |  |  | A.4d; A.5d; A.6ab; A.7d; A.8 |  |
| 8.16c The student will determine the independent and dependent variable, given a practical situation modeled by a linear function; |  |  | A.4e; A.6c; A.8 |  |
| 8.16d The student will graph a linear function given the equation in y = mx + b form; and |  |  | A.5bd; A.6abc; A.7d; A.8; A.9 |  |
| 8.16e The student will make connections between and among representations of a linear function using verbal descriptions, tables, equations, and graphs.  |  |  | A.6abc; A.7f; A.8; A.9 |  |
| 8.17 The student will solve multistep linear equations in one variable with the variable on one or both sides of the equation, including practical problems that require the solution of a multistep linear equation in one variable. |  |  | A.1a; A.4acde; A.7d, A.8 |  |
| 8.18 The student will solve multistep linear inequalities in one variable with the variable on one or both sides of the inequality symbol, including practical problems, and graph the solution on a number line.  |  |  | A.5acd |  |