West Virginia Alternate Academic Achievement Standards

Geometry

Congruence and Constructions

Cluster: Experiment with transformations in the plane.

1 Know the attributes of perpendicular lines, parallel lines, and line segments; angles; and circles. A.M.GHS.1

2 Using manipulatives, translate, rotate, and/or reflect a geometric figure. A.M.GHS.2

3 Given a rectangle, parallelogram, trapezoid, or regular polygon manipulative, recognize the rotations and reflections that carry it onto itself. A.M.GHS.3

4 Recognize that a geometric shape and its translated/rotated/reflected shape are congruent. A.M.GHS.4

5 Trace a given geometric shape to demonstrate translation, rotation, and/or reflection. A.M.GHS.5

Cluster: Identify congruent angles.

6 Given parallel lines cut by a transversal, identify congruent angles. A.M.GHS.6

Cluster: Identify geometric figures.

7 From a list of examples, identify perpendicular line segments, parallel line segments, angles, and circles. Introduce real world situations involving perpendicular line segments, parallel line segments, angles, and circles (e.g., intersecting or parallel streets). A.M.GHS.7

Similarity

Cluster: Understand similarity in terms of similarity transformations.

8 Given two figures, decide if they are similar. A.M.GHS.8

Extending to Three Dimensions

Cluster: Use measurement and volume formulas to solve problems.

9 Measure quantities accurately (e.g., follow a recipe). A.M.GHS.9

10 Given a list of volume formulas for cylinders, pyramids, cones and spheres identify the correct formula to solve real-world problems. A.M.GHS.10

Cluster: Visualize the relation between two dimensional and three-dimensional objects.

11 Identify the shapes of two-dimensional crosssections of three-dimensional objects. A.M.GHS.11

Cluster: Apply geometric concepts in modeling situations.5

12 Use properties of geometric shapes to describe real world objects. A.M.GHS.12

Coordinates, Area, and Perimeter	**Cluster: Use coordinates and determine area and perimeter.** 13 Given coordinates, identify the geometric shapes using proper terminology. A.M.GHS.13 14 From a list of several examples of points on a directed line segment between two given points, determine which one partitions the segment in a given ratio. Instructional Note: Limit to halves and thirds. A.M.GHS.14 15 Find perimeters and areas of squares and rectangles to solve real-world problems. A.M.GHS.15
Applications of Probability	**Cluster: Make predictions.** 16 Make predictions involving real world causeand-effect situations. A.M.GHS.16 17 Recognize that two events A and B are independent. A.M.GHS.17 **Cluster: Use probability to evaluate outcomes of decisions.** 18 Use probabilities to make fair decisions in real world situations (e.g., drawing by lots or using a random number generator). A.M.GHS.18
Modeling with Geometry	**Cluster: Visualize relationships between two dimensional and three-dimensional objects and apply geometric concepts in modeling situations.** 19a Sketch a scale model using graph paper as needed (e.g., the layout of their house). A.M.GHS.19A 19b Interpret a scale model (e.g., locate specific rooms on a diagram of the school). A.M.GHS.19B