

### **Enduring Understandings**

Relationships exist among the angles, sides, lengths, perimeters, and areas of two-dimensional figures.

Geometric figures can change position and maintain the same attributes on a coordinate plane.

### **Essential Questions**

How are angle relationships used?

How does the movement of a geometric figure affect its attributes?

How do line relationships affect angle relationships?

### **Indicators**

- 2.6.1.1 use a variety of triangles and quadrilaterals to draw conclusions about the sum of the measure of their interior angles.
- 2.6.1.3 identify or describe diagonal lines or line segments.
- 2.6.2.1 determine missing angle measures using estimation and direct and indirect measurements.
- 2.6.2.2 measure angles in triangles.
- 2.6.2.3 define and identify angles as adjacent, complementary, or supplementary.
- 2.6.2.4 classify triangles and quadrilaterals by sides and angles.
- 1.6.5.1 graph ordered pairs in the four quadrants of a coordinate plane.
- 2.6.3.1 draw and analyze geometric figures on a coordinate plane.
- 2.6.3.2 draw circles, angles, triangles, and quadrilaterals based on given measurements using a variety of tools and methods.
- 2.6.4.1 locate, give coordinates of, and graph plane figures that are the results of reflections and translations in all quadrants of the coordinate plane.
- 2.6.4.2 locate, give coordinates of, and graph plane figures that are the results of rotations (multiples of 90 degrees).
- 2.6.5.1 identify congruent and similar figures.

### **Enduring Understandings**

Relationships exist among the angles, sides, lengths, perimeters, and areas of two-dimensional figures.

Geometric relationships exist between two-dimensional and three-dimensional figures.

### **Essential Questions**

How are the areas for rectangles, parallelograms, triangles, trapezoids, and circles related?

How can formulas be developed using models?

How are two-dimensional and three-dimensional figures related?

### **Indicators**

- 2.6.1.2 identify and predict the effect of combining and dividing geometric shapes into other shapes.
- 3.6.3.1 develop and use formulas, using related formulas and models, to determine areas of polygons such as triangles, parallelograms, trapezoids, and circles.
- 3.6.3.2 determine the relationship between the diameter and the circumference of a circle.
- 3.6.3.3 estimate and compute the circumference and area of a circle using formulas and other methods.
- 2.6.3.3 make a model of a three-dimensional figure from a two-dimensional drawing.
- 2.6.3.4 make a two-dimensional drawing of a three-dimensional figure.