

Enduring Understanding

Geometric figures are constructed and transformed while maintaining proportional attributes.

Essential Questions

How are geometric properties used to construct geometric figures?

How is proportionality of geometric figures used to solve problems?

Indicators

- 2.IM.3.1 use a compass and straightedge to construct rectangles and triangles. (2.8.3.1)
- 2.IM.4.1 graph plane figures that are similar to a given figure (dilations). (2.8.4.1)
- 2.IM.5.1 apply properties of equality and proportionality to solve problems involving congruent and similar figures. (2.8.5.1)

Enduring Understanding

Relationships exist among the angles, sides, lengths, perimeters, areas, and volumes of geometric figures.

Essential Questions

How are the angles and sides of a polygon related?

How are one-, two-, and three-dimensional measures related?

Indicators

- 2.IM.2.2 find measures of interior and exterior angles of triangles. (2.8.2.2)
- 2.IM.1.1 determine the sum of the measures of interior angles of polygons by partitioning into triangles. (2.8.1.1)
- 2.IM.2.1 use the Pythagorean Theorem to solve problems by determining the length of the missing side of a right triangle. (2.8.2.1)
- 2.IM.1.2 apply the properties of two- and three- dimensional figures to solve problems. (2.8.1.2)
- 3.IM.3.1 determine the relationships among length, area, and volume and describe how a change in one measure affects the others. (3.8.3.1)
- 3.IM.2.1 estimate conversions between units of the same measurement system to solve problems. (3.8.2.1)
- 3.IM.3.2 determine the surface area and volume of three-dimensional figures, including pyramids, spheres, and cones.