

Expectation

2.1 analyze two- and three-dimensional figures using tools and technology when appropriate.

Essential Questions

Why are *point*, *line*, and *plane* the undefined terms of geometry?

How are properties of geometric figures related to their measurable attributes?

How are geometric transformations represented as functional relationships?

Enduring Understandings

Points, lines, and planes are the foundations of geometry.

Geometric transformations are functional relationships.

Indicators

- 2.1.1 analyze properties of geometric figures.
 - 2.1.1.a identify and describe the basic undefined terms of geometry.
 - 2.1.1.b represent and analyze line/segment/plane relationships, including parallel, perpendicular, intersecting, bisecting, midpoint, median, and altitude.
 - 2.1.1.c represent and analyze point relationships, including collinear and coplanar.
 - 2.1.1.d represent and analyze angles and angle relationships, including vertical, adjacent, bisector, complementary, supplementary, obtuse, acute, right, interior, and exterior.
 - 2.1.1.h represent and analyze circles and spheres, including radius, diameter, chord, tangent, secant, central/inscribed angle, inscribed, and circumscribed.
- 2.1.4 construct and/or draw and/or validate properties of geometric figures using appropriate tools and technology.

Properties and relationships include:

 - 2.1.4.a line/segment relationships, including parallel, perpendicular, intersecting, bisecting, midpoint, median, and altitude.
 - 2.1.4.c angles and angle relationships, including bisector, obtuse, acute, and right.
- 2.1.3 use transformations to move figures, create designs, and/or demonstrate geometric properties.

Properties and relationships include:

 - 2.1.3.a reflections, rotations, translations, and dilations.
 - 2.1.3.b the properties and relationships involving congruence, similarity, and symmetry.