

Learning Targets

Scale Drawings, Similarity, and Slope

Lesson 1: What are Scaled Copies?

- I can describe some characteristics of a scaled copy.
- I can tell whether or not a figure is a scaled copy of another figure.

Lesson 2: Scale Factors and Making Scaled Copies

- I can describe what the scale factor has to do with a figure and its scaled copy.
- I can draw a scaled copy of a figure using a given scale factor.
- I know what operation to use on the side lengths of a figure to produce a scaled copy.

Lesson 3: Scaled Relationships

- I can describe the effect on a scaled copy when I use a scale factor that is greater than 1, less than 1, or equal to 1.
- I can explain how the scale factor that takes Figure A to its copy Figure B is related to the scale factor that takes Figure B to Figure A.

Lesson 4: Scale Drawings

- I can explain what a scale drawing is, and I can explain what its scale means.
- I can use actual distances and a scale to find scaled distances.
- I can use a scale drawing and its scale to find actual distances.

Lesson 5: Creating Scale Drawings

- I can determine the scale of a scale drawing when I know lengths on the drawing and corresponding actual lengths.
- I know how different scales affect the lengths in the scale drawing.
- When I know the actual measurements, I can create a scale drawing at a given scale.

Lesson 6: Changing Scales in Scale Drawings

- Given a scale drawing, I can create another scale drawing that shows the same thing at a different scale.
- I can use a scale drawing to find actual areas.

Lesson 7: Units in Scale Drawings

- I can use scales without units to find scaled distances or actual distances.

Lesson 8: Projecting and Scaling

- I can decide if one rectangle is a dilation of another rectangle.
- I know how to use a center and a scale factor to describe a dilation.

Lesson 9: Dilations

- I can apply a dilation to a polygon using a ruler.
- I can apply dilations to figures on a circular grid when the center of dilation is the center of the grid.

Lesson 10: Dilations on a Square Grid

- I can apply dilations to figures on a square grid.
- I can apply dilations to polygons on a rectangular grid if I know the coordinates of the vertices and of the center of dilation.
- If I know the angle measures and side lengths of a polygon, I know the angles measures and side lengths of the polygon if I apply a dilation with a certain scale factor.

Lesson 11: Similarity

- I can apply a sequence of transformations to one figure to get a similar figure.
- I can use a sequence of transformations to explain why two figures are similar.

Lesson 12: Similar Polygons

- I can use angle measures and side lengths to conclude that two polygons are not similar.
- I know the relationship between angle measures and side lengths in similar polygons.

Lesson 13: Similar Triangles

- I know how to decide if two triangles are similar just by looking at their angle measures.

Lesson 14: Side Length Quotients in Similar Triangles

- I can decide if two triangles are similar by looking at quotients of lengths of corresponding sides.
- I can find missing side lengths in a pair of similar triangles using quotients of side lengths.

Lesson 15: Meet Slope

- I can draw a line on a grid with a given slope.
- I can find the slope of a line on a grid.

Lesson 16: Writing Equations for Lines

- I can decide whether a point is on a line by finding quotients of horizontal and vertical distances.

Lesson 17: Using Equations for Lines

- I can find an equation for a line and use that to decide which points are on that line.

Lesson 18: Draw It to Scale

- I can create a scale drawing of my classroom.
- When given requirements on drawing size, I can choose an appropriate scale to represent an actual object.

Lesson 19: The Shadow Knows

- I can model a real-world context with similar triangles to find the height of an unknown object.