SIMILARITY

Topics:

7.1 Ratios and Proportions

Reducing, changing units, rate vs ratio vs proportion, means & extremes

Solving proportions

extended ratio,

Find side lengths based on perimeter and side ratios,

cross multiplying with a binomial

Find lengths, heights, etc using proportions

7.2 Similar Polygons

Are these similar? Similarity statements.

Scale factor

Find missing lengths using proportion, find missing lengths involving binomials, fractals

Overlapping similar polygons

7.3 Proving Triangles are Similar

AA, SSS, SAS

Triangle similarity in overlapping triangles

Triangle similarity with binomials

7.4 Similarity in Right Triangles

Proofs

Altitude 🡪 3 similar triangles

Geometric means

7.5 Proportions in Triangles

Side splitter theorems

Triangle angle bisector thm

Projects

Facial recognition

Scale drawings (map, blue prints, map to directions)

fractals

**Geometry Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**WS Similar Introduction Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period\_\_\_\_**

Solve for X:

1)  2)  3)  4) 

5) A 6 ft tall tent casts a 15 ft shadow. If a “wackywavyinflatablearmflailingtubeman” casts a shadow that is 40 ft long then how tall is it?

6) A telephone booth that is 8 ft tall casts a shadow that is 4 ft long. Find the height of a kangaroo that casts a 2 ft shadow.

7) The distance from Chicago to New York is 1,150 miles. On a map, if 25miles = 1cm. How far apart are they on the map?

8) A map has a scale of 3 cm : 18 km. If Riverside and Smithville are 54 km apart then they are how far apart on the map?

9) A Harley-Davidson MD-1968 motorcycle is 9 ft long. A model of it was built with a scale of 3 in : 1 ft. How long is the model?

10) A 48 ft long hummer H2 limousine is 6 feet tall. A scale model of the limo is 16 inches long. How tall is the model?