Geometry

11.3 Perimeter and Area of Similar Figures

## Areas of Similar Polygons

ratio

areas

lengths

If two polygons are similar with \_\_\_\_\_\_\_\_\_\_\_ in \_\_\_\_\_\_\_\_ of \_\_\_\_\_ , then the \_\_\_\_\_\_\_\_ are in ratio of \_\_\_\_\_\_.

The perimeter of ΔABC is 16 ft, and its area is 64 ft2. The perimeter of ΔDEF is 12 ft. Given that ΔABC ~ ΔDEF, find the ratio of the area of ΔABC to the area of ΔDEF.

Lengths

Areas

Find the area of ΔDEF.

Area of ΔDEF

The ratio of the areas of two regular decagons is 20:36. What is the ratio of their corresponding side lengths in simplest radical form?

Lengths

Areas

Rectangles I and II are similar. The perimeter of Rectangle I is 66 inches. Rectangle II is 35 feet long and 20 feet wide. Show the steps you would use to find the ratio of the areas and then find the area of Rectangle I.

Convert 66 inches to feet

Find perimeter of Rectangle II

Find ratio of perimeters

Find ratio of areas

Find the area of Rectangle II

Use the ratio to find the area of Rectangle I

Assignment: 740 #2-28 even, 35-41 = 21

Extra Credit: 743 #2, 4 = +2