# Practice #16 Geo Sec 10-4 Thursday, April 16, 2020

1. The Similarity Ratio of two similar figures is $\frac{8}{5}$

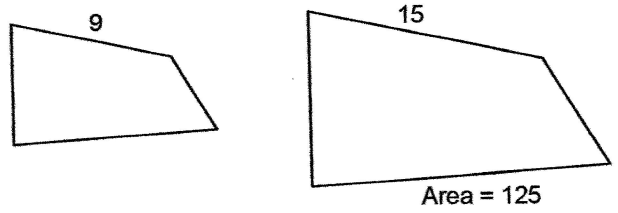
a) State the ratio of the perimeters of these figures: b) State the ratio of the areas of these figures:

2. 1. The ratio of the Areas of two similar figures is $\frac{81}{121}$

a) State the Simitarity Ratio of these figures: b) State the ratio of the perimeters of these figures:

For 3-5 round to the nearest hundredth as needed.

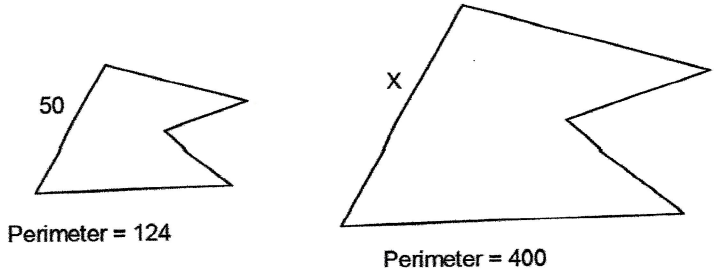
3. These two figures are similar.




a) State the Similarity Ratio:

b) Find the Area of the smaller figure.

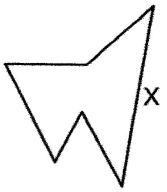
4. These two figures are similar.



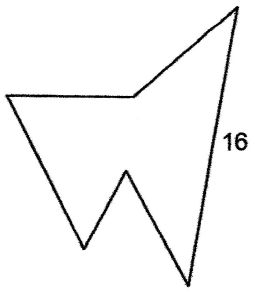

a) State the Similarity Ratio:

b) Find the value of $x$.

5. These two figures are similar.




Area = 225




Area = 576

a) State the Similarity Ratio:

b) Find the value of $x$.

# Practice #16 Geo Sec 10-4 Thursday, April 16, 2020

Answers

1. The Similarity Ratio of two similar figures is $\frac{8}{5}$

a) State the ratio of the perimeters of these figures:

ratio of perim = sim Ratio

$\frac{8}{5}$

b) State the ratio of the areas of these figures:

ratio of areas = (sim Ratio)$^2$

$= \left(\frac{8}{5}\right)^2 = \frac{64}{25}$

2. 1. The ratio of the Areas of two similar figures is $\frac{81}{121}$

a) State the Simitarity Ratio of these figures:

sim Ratio = $\sqrt{\text{Ratio of Areas}} = \sqrt{\frac{81}{121}}$

$= \frac{9}{11}$

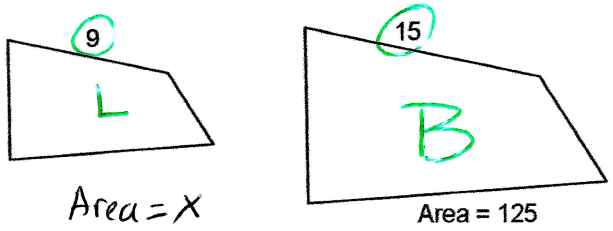
b) State the ratio of the perimeters of these figures:

ratio of perim = sim ratio

$= \frac{9}{11}$

For 3-5 round to the nearest hundredth as needed.

3. These two figures are similar.




a) State the Similarity Ratio:

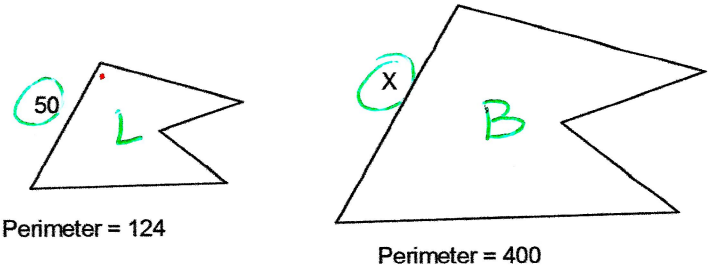
$\frac{B}{L} = \frac{15}{9}$

b) Find the Area of the smaller figure.

ratio of Areas = (sim ratio)$^2$

$\frac{125}{X} = \left(\frac{15}{9}\right)^2 \rightarrow \frac{125}{X} = \frac{225}{81} \rightarrow X = 45$

4. These two figures are similar.




a) State the Similarity Ratio:

$\frac{B}{L} = \frac{X}{50}$

b) Find the value of $x$.

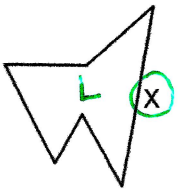
ratio of perimeters = sim ratio

$\frac{400}{124} = \frac{X}{50}$

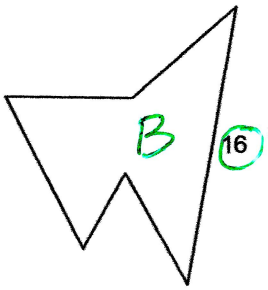
$X = 161.29$

5. These two figures are similar.

See next page




Area = 225




Area = 576

a) State the Similarity Ratio:

$\frac{B}{L} = \frac{16}{x}$

b) Find the value of $x$.

sim ratio = $\sqrt{\text{ratio of the areas}} = \sqrt{\frac{576}{225}} = \frac{24}{15}$

$\frac{16}{x} = \frac{24}{15}$

$x = 10$