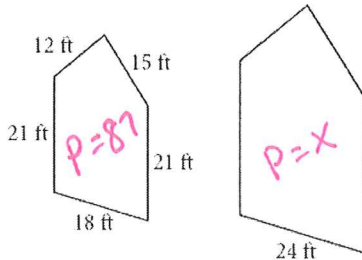


## SLR, PR, AR, VR Practice

1. Find the perimeter of the larger pentagon if the two pentagons are similar.



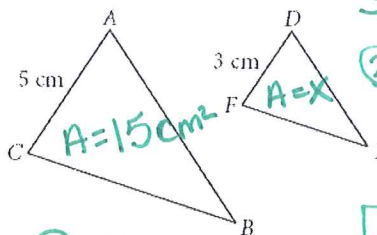
$$SLR = PR$$

$$\frac{24}{18} = \frac{X}{87}$$

$$P = 116 \text{ ft}$$

2.  $\triangle ABC \sim \triangle DEF$ . Area of  $\triangle ABC = 15 \text{ cm}^2$ .

Area of  $\triangle DEF = \underline{\hspace{2cm}}$  ①  $SLR = \frac{3}{5}$



② convert to AR

$$AR = SLR^2$$

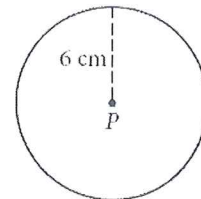
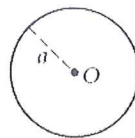
$$AR = \left(\frac{3}{5}\right)^2 = \frac{9}{25}$$

③  $\frac{9}{25} = \frac{X}{15}$

$AR = \frac{9}{25}$  use as a prop.

$$X = 5.4 \text{ cm}^2$$

3.  $\frac{\text{Area of circle O}}{\text{Area of circle P}} = \frac{4}{9} = \underline{\text{AR is given}}$   
 $a = \underline{\hspace{2cm}}$  need SLR



$$SLR = \sqrt{AR}$$

$$SLR = \sqrt{\frac{4}{9}}$$

$$SLR = \frac{2}{3}$$

Use for a proportion

$$\frac{2}{3} = \frac{a}{6}$$

$$a = 4 \text{ cm}$$

4. The ratio of the corresponding midsegments of two similar trapezoids is 4:5. What is the ratio of their areas?

$$SLR = \frac{4}{5}$$

$$AR = SLR^2 \Rightarrow AR = \left(\frac{4}{5}\right)^2$$

$$AR = \frac{16}{25}$$

5. The ratio of the areas of two similar pentagons is 4:9. What is the ratio of their corresponding sides?

$AR = \frac{4}{9}$  is given SLR is needed

$$SLR = \sqrt{AR} \quad SLR = \sqrt{\frac{4}{9}}$$

$$SLR = \frac{2}{3}$$

6. If  $ABCDE \sim FGHIJ$ ,  $AC = 6 \text{ cm}$ ,  $FH = 10 \text{ cm}$ , and area of  $ABCDE = 320 \text{ cm}^2$ , then area of  $FGHIJ = \underline{\hspace{2cm}}$ .

$$\frac{AC}{FH} = SLR$$

$$\frac{6}{10} = \frac{3}{5} = SLR$$

Need AR

$$AR = SLR^2$$

$$AR = \frac{9}{25}$$

$$\frac{9}{25} = \frac{320}{X}$$

Use for Proportion

$$X = 888.8 \text{ cm}^2$$

$$\text{or } X = 8000/9$$