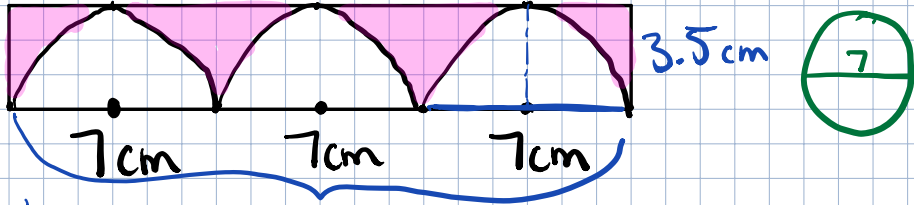


2/25/20

Circle Similarity

Warm up. Find shaded area.



Rectangle

$$A = lw$$

$$A = 21(3.5)$$

$$A = 73.5 \text{ cm}^2$$

21 cm

Circle

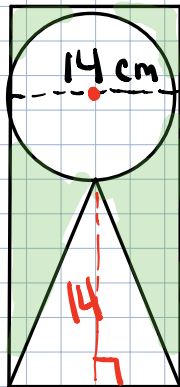
$$A = \pi r^2$$

$$A = 3.14(3.5)^2$$

$$A = 38.465 \text{ cm}^2$$

1/2 Circle

$$\frac{38.465}{2} = 19.23 \text{ cm}^2$$



28 cm

$$A = lw$$

$$A = 28(14)$$

$$A =$$

Circle

$$A = \pi r^2$$

$$A = 3.14(7)^2$$

$$A =$$

Triangle

$$A = \frac{1}{2}bh$$

$$A = \frac{1}{2}(14)(14)$$

$$A =$$

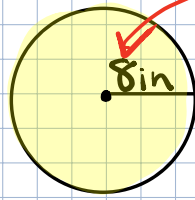
$$73.5 - 3(19.23) = 15.8 \text{ cm}^2$$

$$A = 140.14 \text{ cm}^2$$

$$C = \pi d$$

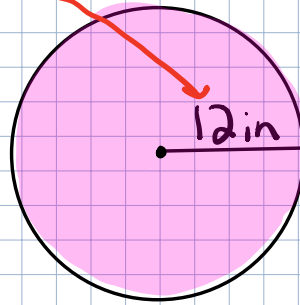
$$A = \pi r^2$$

Exact



$$C = 16\pi \text{ in}$$

$$A = 64\pi \text{ in}^2$$



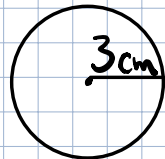
$$C = 24\pi \text{ in}$$

$$A = 144\pi \text{ in}^2$$

$$\text{Scale Factor} = \frac{8}{12} = \frac{2}{3}$$

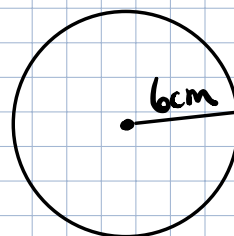
$$\text{Ratio of Circumferences} = \frac{16\pi}{24\pi} = \frac{2}{3}$$

$$\text{Ratio of Areas} = \frac{64\pi}{144\pi} = \frac{4}{9} = \frac{2^2}{3^2}$$



$$C = 6\pi \text{ cm}$$

$$A = 9\pi \text{ cm}^2$$



$$C = 12\pi \text{ cm}$$

$$A = 36\pi \text{ cm}^2$$

$$\text{Scale Factor}$$

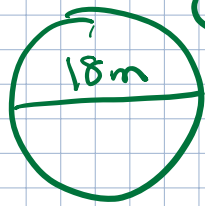
$$\frac{3}{6} = \frac{1}{2}$$

$$\text{Ratio of Circumferences}$$

$$\frac{1}{2}$$

$$\text{Ratio of Areas}$$

$$\frac{1}{4} = \frac{1^2}{2^2}$$



$$C = 56.52 \text{ m}$$

$$C = 37.68 \text{ m}$$



$$\frac{56.52}{37.68} = \frac{18}{d}$$

$$12 \text{ m} = d$$