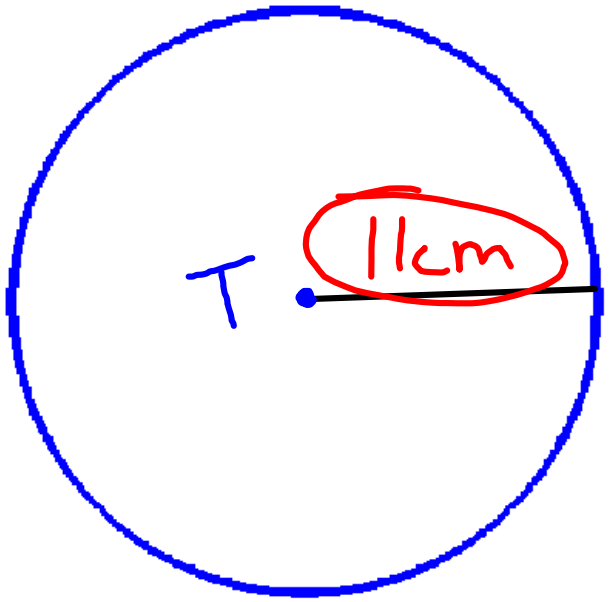
Area of Shaded Regions w/ Circles

May 10, 2007



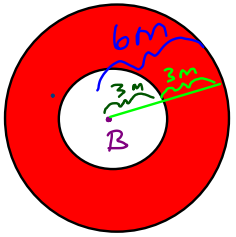
$$A_{\odot T} = \pi r^2$$

$$= \pi (11\text{cm})^2 \quad \leftarrow \text{exact}$$

$$= 121\pi \text{ cm}^2$$

$$\approx 121(3.14)\text{cm}^2$$

$$\approx 379.94 \text{ cm}^2 \quad \leftarrow \text{approx}$$



These Two Circles have the Same Center B

find the area of the Shaded (Red) Region

$\odot_{BR}$ → Big Red Circle

$\odot_{BW}$ → Small White Circle

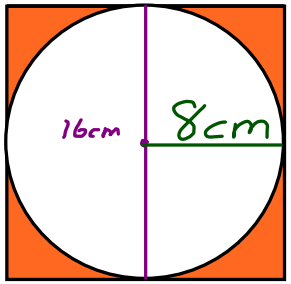
$$A_{SR} = A_{\odot BR} - A_{\odot BW}$$

$$A_{\odot BR} = \pi r^2$$
$$= \pi (6m)^2$$
$$= 36\pi m^2$$

$$A_{\odot BW} = \pi r^2$$
$$= \pi (3m)^2$$
$$= 9\pi m^2$$

$$A_{SR} = A_{\odot BR} - A_{\odot BW}$$
$$= 36\pi m^2 - 9\pi m^2$$
$$= 27\pi m^2 \rightarrow \text{exact ans.}$$
$$\approx 27(3.14)\, m^2$$
$$\approx 84.78 m^2 \rightarrow \text{approx.}$$

Circle in a Square



$A_{SR} = A_{sq} - A_{\odot}$

$A_{sq} = s \cdot s$

$= (16\text{cm})(16\text{cm})$

$= 256\text{cm}^2$

$A_{\odot} = \pi r^2$

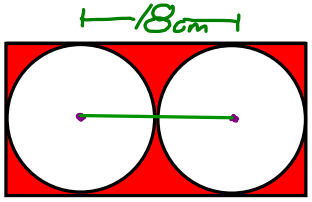
$= \pi (8\text{cm})^2 =$

$= 64\pi\text{cm}^2 \approx 64(3.14)\text{cm}^2 \approx 200.96\text{cm}^2$

$A_{SR} = A_{sq} - A_{\odot}$

$= 256\text{cm}^2 - 200.96\text{cm}^2$

$\approx 55.04\text{cm}^2$



2 congruent Circles in a Rectangle

O.T.L.

(0) Finish & Due the last S.R. Problem.

(1) pg 263: Challenge: 5-8 (all)

(2) If you have not already, I must have a $8\frac{1}{2} \times 11$ sketch of your poster design!