

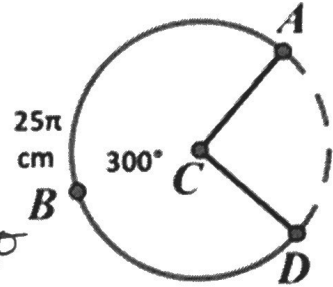
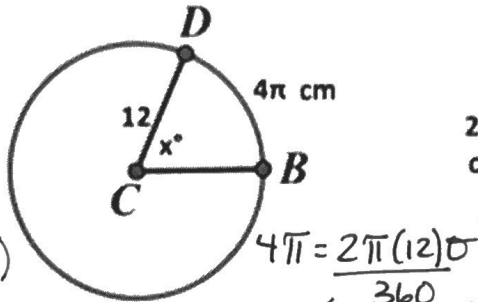
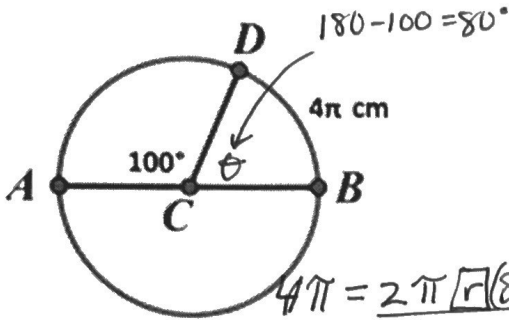
$$AL = \frac{2\pi r \theta}{360}$$

For #11-13, solve for the requested variable. C is the center of each circle.

11. $r = \underline{9} \text{ cm}$

12. $x^\circ = \underline{60^\circ}$

13. $d = \underline{30 \text{ cm}}$



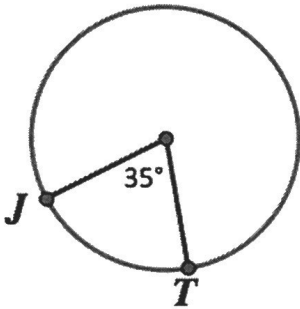
$r = 9$

$$\frac{1440\pi}{160\pi} = \frac{2\pi r (80)}{360}$$

$$\frac{1440\pi}{24\pi} = \frac{2\pi (12)\theta}{360}$$

$$25\pi = \frac{2\pi r (300)}{360}$$

14. Circumference = 10 m; Find the arc length of \widehat{JT} =



$$AL = \frac{\text{Circumference} \cdot \theta}{360}$$

$$AL = \frac{10(35)}{360} = \frac{35}{36} \approx .97 \text{ m}$$

$$\frac{9600\pi}{600\pi} = \frac{2\pi r (300)}{600\pi}$$

$$15 = r$$

$$\text{diameter} = 2(r)$$

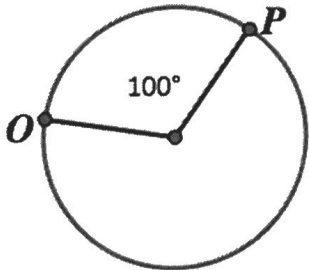
$$2(15) = 30$$

15. The arc length of $\widehat{OP} = 10\pi$ inches;

$r = \underline{18 \text{ in}}$

16. The arc length of $\widehat{QT} = 22 \text{ cm}$;

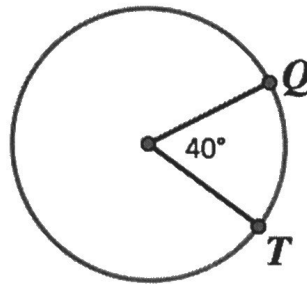
$d = \underline{63 \text{ cm}}$ (to the tenth)



$$10\pi = \frac{2\pi r (100)}{360}$$

$$\frac{3600\pi}{200\pi} = \frac{2\pi r (100)}{200\pi}$$

$18 = r$



$$22 = \frac{2\pi r (40)}{360}$$

$$\frac{7920}{(80\pi)} = \frac{2\pi r (40)}{80\pi}$$

$31.5 \approx r$

$$\frac{\quad}{\times 2}$$

63 diameter