STATION 1

Name the following parts of the circle based on the diagram:

1.) Radius $\overline{OC}$

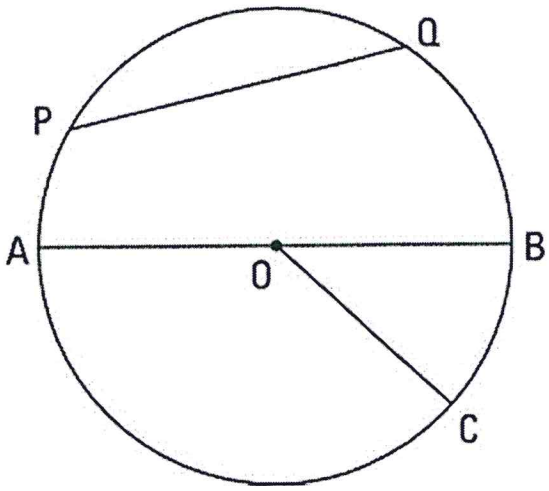
2.) Diameter $\overline{AB}$

3.) Chord $\overline{PQ}$

4.) Circle $\odot O$

5.) Major Arc (Many) $\overset{\frown}{ABC}$

6.) Minor Arc (Many) $\overset{\frown}{BC}$



7.) Find the diameter of a circle that has an area of 125π. Round to the nearest tenth.

$125\pi = \pi r^2$

$\sqrt{125} = \sqrt{r^2}$

$r = 11.2 \quad \times 2 \rightarrow$ **$d = 22.4$**

8.) Find the area of the shaded region. Round to the nearest tenth.

$A_\Delta = \frac{1}{2}(7)(10)$

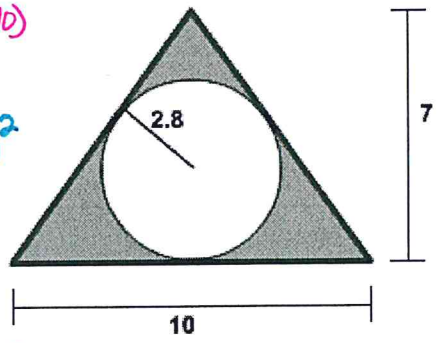
$= 35$

$A_O = \pi(2.8)^2$

$= 24.6$

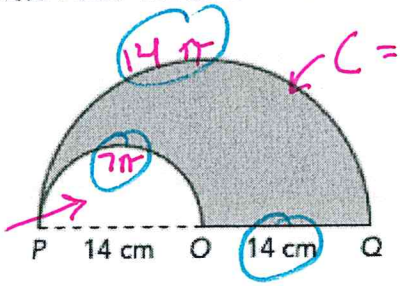
$35 - 24.6$

$10.4\ u^2$



9.)

A metal worker cuts out a large semicircle with a diameter of 28 centimeters. Then the metal worker cuts a smaller semicircle out of the larger one and removes it. The diameter of the semicircular piece that is removed is 14 centimeters. Find the distance around the shape after the smaller semicircle is removed. Round to the nearest tenth.



$C = \frac{28\pi}{2} = 14\pi$

$C = \frac{14\pi}{2}$

$C = 7\pi$

$14\pi + 7\pi + 14$

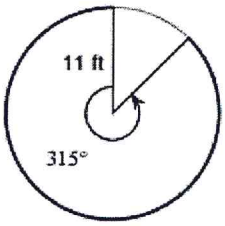
$= 21\pi + 14$

$\approx$ **80 cm**

STATION 2

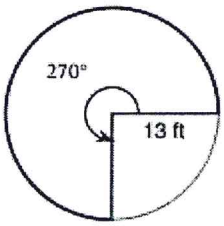
Find the length of each arc. Round your answers to the nearest tenth.

10.)



$L = \frac{315}{360} \cdot 2\pi(11) = \boxed{60.5 \text{ ft.}}$

11.)



$L = \frac{270}{360} \cdot 2\pi(13) = \boxed{61.3 \text{ ft.}}$

12.)

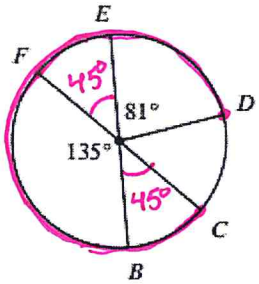
$r = 18$ cm, $\theta = 60°$

$L = \frac{60}{360} \cdot 2\pi(18) = \boxed{18.8 \text{ cm}}$

Find the measure of the arc or central angle indicated. Assume that lines which appear to be diameters are actual diameters.

13.)

$m\overset{\frown}{CFD}$

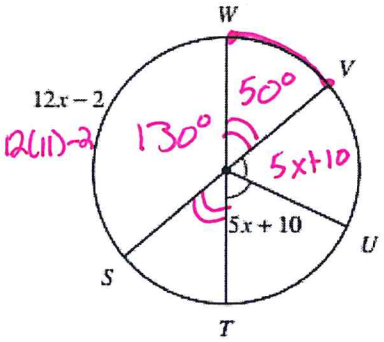


$45 + 135 + 45 + 81$

$= \boxed{306°}$

14.)

$m\overset{\frown}{WV} = \boxed{50°}$



$5x+10 + 5x+10 = 12x-2$

$10x + 20 = 12x - 2$

$20 = 2x - 2$

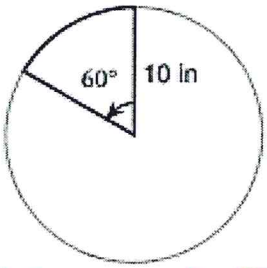
$22 = 2x$

$x = 11$

STATION 3

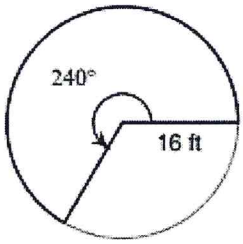
Find the area of each sector. Round your answers to the nearest tenth.

15.)



$SA = \frac{60}{360} \cdot \pi(10)^2 = \boxed{52.4 \text{ in.}^2}$

16.)



$SA = \frac{240}{360} \cdot \pi(16)^2 = \boxed{536.2 \text{ ft}^2}$

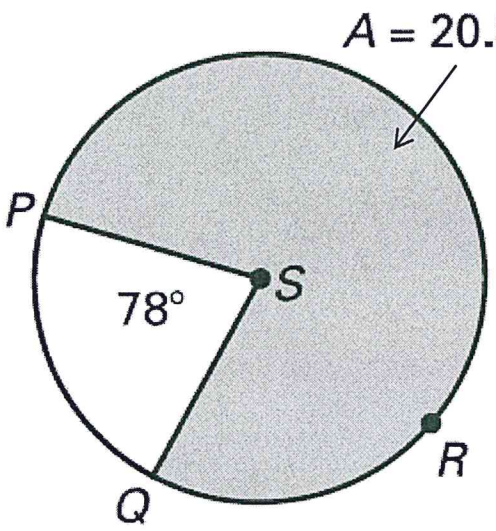
17.)

$r = 7$ km, $\theta = 60°$

$SA = \frac{60}{360} \cdot \pi(7)^2 = \boxed{25.7 \text{ km}^2}$

18.)

Find the radius of circle S Round to the nearest tenth.



(Area of the shaded region)

$\frac{360}{282}(20.89) = \left(\frac{282}{360}\pi r^2\right)\frac{360}{282}$

$\frac{26.7}{\pi} = \frac{\pi r^2}{\pi}$

$\sqrt{8.5} = \sqrt{r^2}$

$\boxed{r \approx 2.9 \text{ ft.}}$