

G6 B Level Test Review

Find the area. Round your answer to the nearest hundredth.

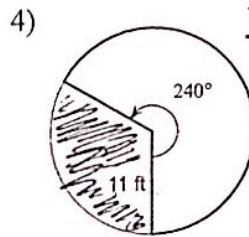
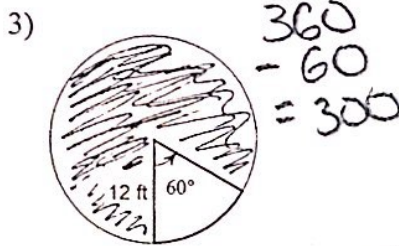
Find the diameter Round your answer to the nearest hundredth.

1) circumference = 12π km
 $12\pi = \pi d$
 $12 = d$
 $r = 6$
 $A = \pi r^2 = 36\pi \approx 113.10 \text{ km}^2$

2) area = 124.7 ft^2

$A = \pi r^2$
 $124.7 = \pi r^2$
 $\frac{124.7}{\pi} = r^2$
 $\sqrt{39.69} = r$
 $6.3 = r$
 diameter = 12.6 ft

Find the arc length AND area of the sector of the shaded region.



$\frac{360}{360} - \frac{240}{360} = \frac{120}{360}$
 Arc = $\frac{120}{360} \cdot 2 \cdot \pi \cdot 11$
 $= 7.3 \pi \approx 23.04 \text{ ft}$

Area Length = $\frac{300}{360} \cdot 2 \pi (12)$
 $= \frac{300}{360} \cdot 24\pi \approx 20\pi \text{ ft} \approx 62.83 \text{ ft}$

Area of Sector = $\frac{120}{360} \cdot \pi 11^2$
 $= 40.3 \pi \text{ ft}^2 \approx 398.07 \text{ ft}^2$

Area = $\frac{300}{360} \pi (12^2) = 120\pi \text{ ft}^2 \approx 376.99 \text{ ft}^2$

Identify the center and radius of each.

5) $(x-3)^2 + (y-10)^2 = 11$
 center $(3, 10)$
 radius = $\sqrt{11} \approx 3.3$

6) $(x+15)^2 + y^2 = 6$
 center $(-15, 0)$
 radius = $\sqrt{6} \approx 2.45$

Use the information provided to write the equation of each circle. If needed, graph points on another sheet of graph paper.

7) Ends of a diameter: $(14, 8)$ and $(2, 16)$

8) Center: $(-1, 8)$
 Point on Circle: $(8, 5)$

$(X-8)^2 + (y-12)^2 = 52$

$(x+1)^2 + (y-8)^2 = 90$

Find the measure of the arc or angle indicated.

9) 134°

$$\begin{array}{r} 360 \\ - 134 \\ - 100 \\ \hline 126 \\ \frac{126}{2} = 63^\circ \end{array}$$

10)

$$\begin{array}{r} 107 \\ \times 2 \\ \hline 214 \\ 214 \\ - 154 \\ \hline 60^\circ \end{array}$$

11. In $\odot P$, \overline{AB} is a diameter, $m\angle DAB = 65^\circ$, $\overline{AB} \parallel \overline{EF}$, and $m\widehat{EF} = 88^\circ$. Calculate each of the following:

$$\begin{array}{r} 180 \\ - 88 \\ \hline 92 \end{array}$$

a. $m\widehat{FB} = 46^\circ$

b. $m\angle BAF = 23^\circ$

c. $m\widehat{AE} = 46^\circ$

d. $m\widehat{AD} = 50^\circ$

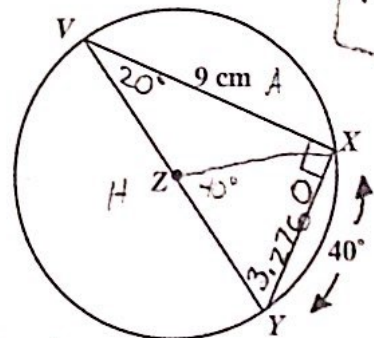
e. $m\widehat{DCB} = 130^\circ$

f. $m\angle ADB = 90^\circ$

12. In $\odot Z$, \overline{VY} is a diameter, $m\widehat{YX} = 40^\circ$. Find the following items:

a. Calculate the area of circle Z.

(A) Area = $\pi (4.789)^2$
 $= 72.05 \text{ cm}^2$



$$\tan 20^\circ = \frac{x}{9}$$

$$x = 9(\tan 20^\circ)$$

$$= 3.276 \text{ cm}$$

$$\cos 20^\circ = \frac{9}{H}$$

$$H = \frac{9}{\cos 20^\circ} = 9.578 \text{ cm}$$

$$\text{radius} = \frac{9.578}{2} = 4.789 \text{ cm}$$

$$m\angle VZX = 140^\circ$$

$$\text{length } \widehat{XV} = \left(\frac{140}{360}\right) 2\pi r$$

$$= \left(\frac{140}{360}\right) 2\pi (4.789)$$

$$= 11.7 \text{ cm}$$