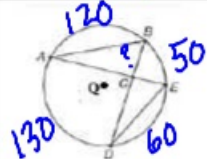
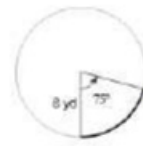


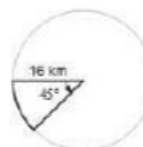
Name: Key Date: 3.5.18 Period: 3,5,7

1  Given that $\widehat{AB} = 120^\circ$, $\widehat{BE} = 50^\circ$, $\widehat{ED} = 60^\circ$, find $m\angle ABD$

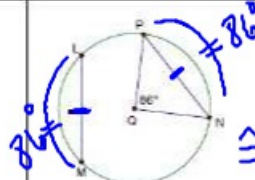
$$\begin{array}{r} 120 \\ 50 \\ \hline 230 \end{array} \quad \begin{array}{r} 360 \\ -230 \\ \hline 130 \end{array} \quad \text{Angle} = \frac{\text{Arc}}{2} \quad x = \frac{130}{2} \quad \boxed{x = 65^\circ}$$

2  Find the length of the arc. Give the EXACT answer. (leave π)

$$A.L. = \frac{2\pi r \theta}{360} = \frac{2\pi \cdot 8 \cdot 75}{360} = \boxed{\frac{10\pi}{3} \text{ yds.}}$$

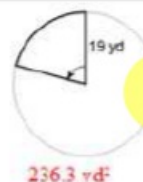
3  Find the area of the sector. Round to the nearest hundredth.

$$A.O.S. = \frac{\pi r^2 \theta}{360} = \frac{\pi \cdot 16^2 \cdot 45}{360} = \boxed{100.53 \text{ km}^2}$$

4  Use the given information to find the $m\widehat{LM}$.


Angle = Arc
 \cong chords = \cong Arcs

$$\boxed{\widehat{LM} = 86^\circ}$$

5  Given the area of the sector is 236.3 yds^2 , find the measure of the central angle.

$$A.O.S. = \frac{\pi r^2 \theta}{360} \quad 236.3 = \frac{\pi \cdot 19^2 \cdot \theta}{360}$$

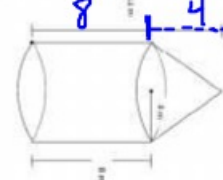
$$85068 = \frac{\pi \cdot 19^2 \cdot \theta}{\pi \cdot 19^2} \quad \boxed{75^\circ = \theta}$$

6  The figure below is a scale drawing of two cylinders, A and B. Cylinder A has a radius of 7 in and a height of 3 in. Cylinder B has a radius of 4 in and a height of 10 in. Are the volumes of these cylinders equal? If not, which one has the greater volume?

$$V = \pi r^2 \cdot h \quad A: V = \pi \cdot 7^2 \cdot 3 \quad B: V = \pi \cdot 4^2 \cdot 10$$

$$V = 147\pi \quad \boxed{V = 160\pi}$$

B has the greater volume

7  Find the volume of the composite figure. Round your answer to the nearest hundredth.

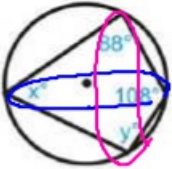
$$\text{Cone } V = \frac{\pi r^2 h}{3} = \frac{\pi \cdot 4^2 \cdot 4}{3}$$

$$\text{Cylinder } V = \pi r^2 h \quad V = \pi \cdot 4^2 \cdot 8$$

$$V = 67.02 \quad V = 402.12$$

ADD: $402.12 + 67.02 = \boxed{469.14 \text{ m}^3}$

8



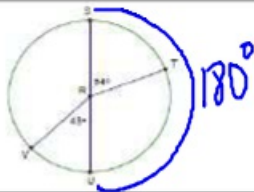
Find the measurement of x and y.

Opp. add to 180°

$$\begin{array}{r} 180 \\ - 108 \\ \hline x = 72^\circ \end{array}$$

$$\begin{array}{r} 180 \\ - 88 \\ \hline y = 92^\circ \end{array}$$

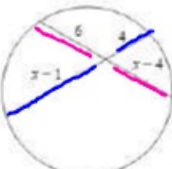
9



What type of arc is STU? Circle one.

Major Arc Minor Arc Central Angle Semicircle

10



Solve for x.

$$4(x-1) = 6(x-4)$$

$$4x - 4 = 6x - 24$$

$$-4x - 4 = 6x - 24$$

$$-4x - 4 + 4 = 6x - 24 + 4$$

$$-4x = 6x - 20$$

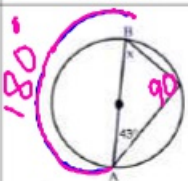
$$-4x - 6x = 6x - 20 - 6x$$

$$-10x = -20$$

$$\frac{-10x}{-10} = \frac{-20}{-10}$$

$$x = 2$$

11



Given the diameter AB, find x.

$$x + 90 + 43 = 180$$

$$x + 133 = 180$$

$$x + 133 - 133 = 180 - 133$$

$$x = 47$$

12



Find the measurement of x.

$$3x + 7 = 6x - 11$$

$$-3x + 7 = 6x - 11$$

$$-3x + 7 - 6x = 6x - 11 - 6x$$

$$-9x + 7 = -11$$

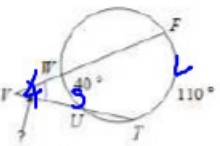
$$-9x + 7 - 7 = -11 - 7$$

$$-9x = -18$$

$$\frac{-9x}{-9} = \frac{-18}{-9}$$

$$x = 2$$

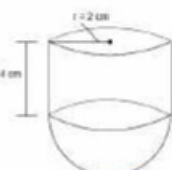
13



Find the measurement of <V.

$$\frac{L_{Arc} - S_{Arc}}{2} = \frac{110 - 40}{2} = \frac{70}{2} = 35$$

14



The bottom of the cylindrical container shown has the shape of a hemisphere. The total volume of the container is _____. Leave your answer in terms of π.

Cylinder $V = \pi r^2 h$

$$V = \pi (2)^2 (4) = 16\pi$$

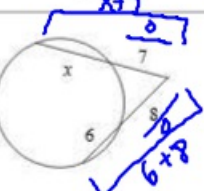
Hemisphere $V = \frac{4}{3}\pi r^3$

$$V = \frac{4}{3}\pi (2)^3 = \frac{32\pi}{3}$$

ADD

$$16\pi + \frac{32\pi}{3} = \frac{48\pi}{3} + \frac{32\pi}{3} = \frac{80\pi}{3}$$

15



Find the measurement of x.

$$7(x+7) = 8(14)$$

$$7x + 49 = 112$$

$$7x + 49 - 49 = 112 - 49$$

$$7x = 63$$

$$\frac{7x}{7} = \frac{63}{7}$$

$$x = 9$$