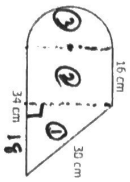


Name: _____

Geometry Review: Packet #7

Topic #1: Area of Composite Figures & Shaded Regions

1. Find the total area. Round to the nearest hundredth.



$$\begin{aligned} & \textcircled{1} x^2 + 18^2 = 30^2 \\ & x = 24 \\ & A = \frac{1}{2}bh \\ & = \frac{1}{2}(16)(24) \\ & = 216 \\ & \textcircled{2} A = 1 \cdot w \\ & 16 \cdot 24 = 384 \\ & A = 826.19 \text{ cm}^2 \\ & \textcircled{3} A = \frac{\pi r^2}{2} \\ & = \frac{\pi (16)^2}{2} \\ & A = 72\pi \end{aligned}$$

2. If the diameter of the circle below is 28 meters, find the area of the shaded region. Round to the nearest hundredth.



$$\begin{aligned} & \textcircled{1} \frac{28}{2} = \frac{28^2}{2} = 14\sqrt{2} \approx 19.80 \\ & A = \frac{1}{2}(19.80)(19.8) \\ & = 196.02 \\ & \textcircled{2} A = \pi r^2 \\ & = \pi (14)^2 \\ & = 615.75 \\ & 615.75 - 196.02 = 419.73 \text{ m}^2 \end{aligned}$$

Topic #2: Volume & Surface Area of 3D Figures

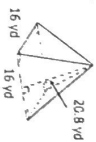
Find the volume and total surface area of each figure. Round to the hundredths when necessary.

Figure	Volume	Surface Area
	$V = l \cdot w \cdot h$ $= 19 \cdot 10 \cdot 12$ $= 2,280 \text{ m}^3$	
	$V = B \cdot h$ <i>(B = area of the base)</i> $V = \frac{1}{2}(14)(24)(22.5)$ $= 3780 \text{ m}^3$	
	$V = \pi r^2 h$ $= \pi (16)^2 (22)$ $V = 4423.36 \text{ mm}^3$	

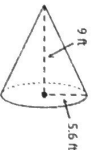
Figure

Volume

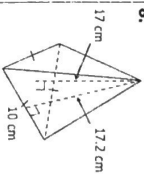
Surface Area



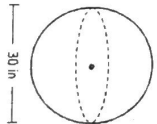
$$\begin{aligned} & V = \frac{1}{3} B \cdot h \quad B = 16 \cdot 16 \\ & \quad \quad \quad B = 256 \\ & V = \frac{1}{3} (256) (20.8) \\ & V = 1638.4 \text{ yd}^3 \\ & h^2 + 8^2 = 20.8^2 \\ & h = 36.8 \text{ yd} \\ & h = 19.2 \end{aligned}$$



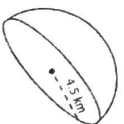
$$\begin{aligned} & V = \frac{1}{3} \pi r^2 h \\ & V = \frac{1}{3} \pi (5.6)^2 \cdot 9 \\ & V = 295.56 \text{ ft}^3 \end{aligned}$$



$$\begin{aligned} & V = \frac{1}{3} B \cdot h \quad B = \frac{1}{2}(10)(8.66) \\ & = \frac{1}{3} (43.3)(17) \\ & \quad \quad \quad B = \frac{1}{2}(8.66)^2 \\ & \quad \quad \quad B = 43.3 \\ & V = 245.37 \text{ cm}^3 \end{aligned}$$



$$\begin{aligned} & V = \frac{4}{3} \pi \cdot r^3 \\ & = \frac{4}{3} \pi (15)^3 \\ & V = 14137.17 \text{ in}^3 \end{aligned}$$



$$\begin{aligned} & V = \frac{4}{3} \cdot \pi \cdot r^3 \\ & V = \frac{4}{3} \pi (4.5)^3 \\ & V = 190.85 \text{ km}^3 \end{aligned}$$