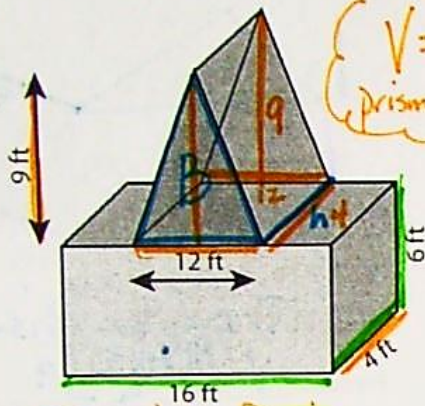~~Unit 9, Page 20~~

## Volume of Composite or Combined Figures

### Notes

Find the volume of each figure. Round the answer to two decimal places. ( use $\pi = 3.14$ )

Label your work.  Identify the figure name, write the formula and show all work.
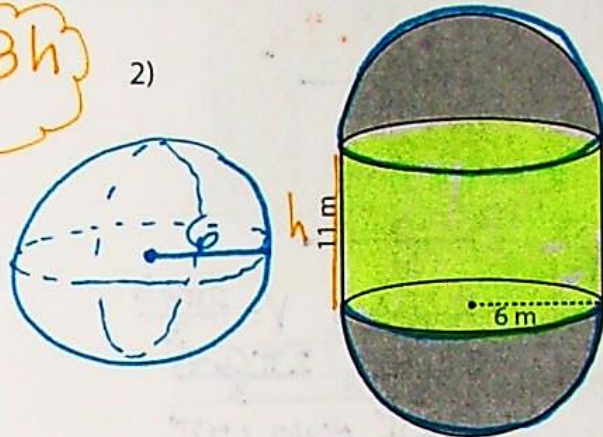
1)

$V = Bh$
prism

9 ft
9
12 ft
16 ft
4 ft
6 ft

2)

6 m
h 11 m

Ⓑ Triangle $\left(\frac{bh}{2}\right)$

Name: __Triangular Prism__

Formula: $V = \left[\frac{bh}{2}\right] h$

$\left[\frac{(12)(9)}{2}\right](4)$

$54(4) = \boxed{216 \text{ ft}^3}$

Name: __Sphere__

Formula: $V = \dfrac{4\pi r^3}{3}$

$\dfrac{4\pi (6)^3}{3} = \dfrac{4\pi (2)(6)}{3}$

$4\pi (72) = \boxed{288\pi \text{ m}^3}$

Ⓑ rectangle $(\ell w)$

Name: __Rectangular Prism__

Formula: $V = (\ell w) h$

$= (16)(4)(6)$

$= \boxed{384 \text{ ft}^3}$

Ⓑ Circle $A = \pi r^2$

Name: __Cylinder__

Formula: $V = (\pi r^2) h$

$\pi (6)^2 (11)$

$\pi (36)(11)$

$\boxed{396 \pi \text{ m}^3}$

Combined Volume: $\boxed{600 \text{ ft}^3}$
(Total Volume)

Combined Volume: $\boxed{2147.76 \text{ m}^3}$
(Total Volume)

$\begin{array}{r} 216 \\ + 384 \\ \hline 600 \end{array}$

$\begin{array}{r} 288\pi \\ + 396\pi \\ \hline 684\pi \end{array} \Rightarrow 684(3.14)$