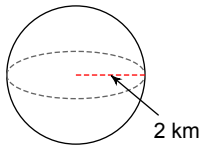
 Name_____

# Homework 4.3 - Cones and Spheres

Date_____

**Find the surface area and volume of each figure.**

1)

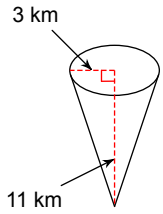



$r = 2$

$SA = 50.24 km^2$

$V = 33.49 km^3$

2)




$r = 3$

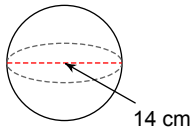
$h = 11$

$s = ? = 11.4$ (pythag...)

$SA = 135.65 km^2$

$V = 103.62 km^3$

3)

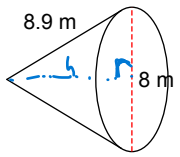



$r = 7$

$SA = 615.44 cm^2$

$V = 1436.03 cm^3$

4)




$r = 4$

$h = ? \rightarrow 7.95$ or 8.

$S = 8.9$

$SA = 424.53 m^2$

$V = 133.97 m^3$

**Use the appropriate formula to solve for the missing measurement.**

5) A sphere has a surface area of $1256 cm^2$. Determine the length of the radius.

$SA = 4\pi r^2$

$1256 = 4(3.14)r^2$

$\frac{1256}{12.56} = \frac{12.56r^2}{12.56}$

$\sqrt{100} = \sqrt{r^2}$

$r = 10 cm$

7) A triangular prism has a volume of $1350 m^3$, a base of 25m, and a length of 12. Determine the length of the height.

$V = \frac{bh\ell}{2}$

$1350 = \frac{(25)h(12)}{2}$ (25×12÷2)

$\frac{1350}{150} = \frac{150h}{150} \rightarrow h = 9 cm$

6) A cone has a volume of $1072.33 m^3$ and height of 16m. Determine the length of the radius.

$V = \frac{\pi r^2 h}{3}$

$1072.33 = \frac{(3.14)r^2(16)}{3}$ (3.14×16÷3)

$\frac{1072.33}{16.75} = \frac{16.75r^2}{16.75}$

$\sqrt{64.02} = \sqrt{r^2}$

$8 m = r$