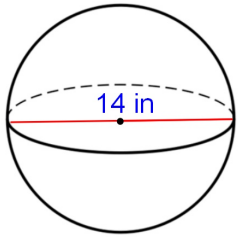
Bellwork Monday, June 2, 2014

1. Find the Volume and Surface Area of this sphere. Leave your answer in terms of π.



$SA = 4\pi(7)^2 = 196\pi \text{ in}^2$

$Vol = \frac{4}{3}\pi(7)^3 = \frac{1372}{3}\pi \text{ in}^3$

2. The Surface Area of a sphere is 250 in^2. Find the Volume to the nearest hundredth.

$SA = 4\pi r^2$

$\frac{250}{4\pi} = \frac{4\pi r^2}{4\pi}$

$\sqrt{19.89} = \sqrt{r^2}$

$r = 4.46$

Vol

$\frac{4}{3}(\pi)(4.46)^3$

371.61 in^3

3. The Volume of a sphere is 1225 cm^3. Find the Surface Area to the nearest tenth.

$\frac{3}{4} \cdot 1225 = \frac{4}{3}\pi r^3 \cdot \frac{3}{4}$

$\frac{918.75}{\pi} = \frac{\pi r^3}{\pi}$

$292.45 = r^3$

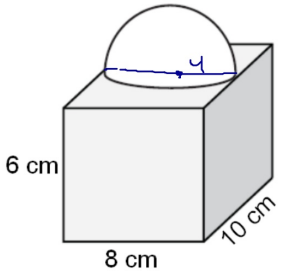
$\sqrt[3]{\ } = r = 6.64\text{cm}$

SA

$4(\pi)(6.64)^2$

554.05 cm^2

4. Find the surface area and volume to the nearest tenth.



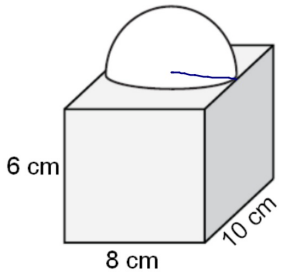
Volume

Box $Bh = (8)(10)6$

480 cm^3

hemisphere $\frac{\frac{4}{3}\pi(4)^3}{2} = 134.04$

614.04 cm^3



✓

SA box + SA hemisphere − circle

$376 + 32\pi - \pi(4)^2$

$\boxed{426.26\ cm^2}$

pth

SA prism = 2B + LA

$2(80) + 36(6)$

$160 + 216 = 376$

hemisphere $\frac{4\pi(4)^2}{2}$