Do-now:

1. Turn in HW. (Classwork from Friday.)

2. Take out reference sheet.

3. What is the surface area of a cylinder with a radius of 4 inches and a height of 5 inches? What is the lateral area?

$SA = 2\pi r^2 + 2\pi rh$

$= 2\pi \cdot 4^2 + 2\pi \cdot 4 \cdot 5$

$= 2\pi \cdot 16 + 2\pi \cdot 20$

$= 32\pi + 40\pi$

$= 72\pi \text{ in.}^2$

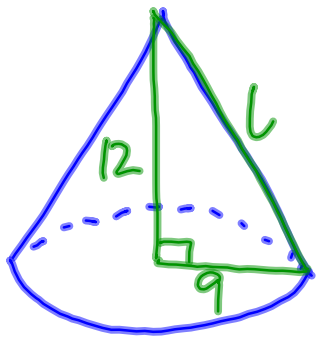
$L = 2\pi rh$

$= 2\pi \cdot 4 \cdot 5$

$= 2\pi \cdot 20$

$= 40\pi \text{ in.}^2$

The vertical height of a cone is 12 inches and the radius is 9 inches. What is the lateral area of the cone?



$9^2 + 12^2 = l^2$

$81 + 144 = l^2$

$225 = l^2$

$15 = l$

$L = \pi r l$

$L = \pi \cdot 9 \cdot 15$

$L = 135\pi \text{ in.}^2$

If the volume of a sphere is 2304π cubic inches, what is the surface area?

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

$\frac{2304\pi}{\pi} = \frac{\frac{4}{3}\pi r^3}{\pi}$

$\frac{2304}{\left(\frac{4}{3}\right)} = \frac{r^3}{\frac{4}{3}}$

$\sqrt[3]{1728} = \sqrt[3]{r^3}$

$12 = r$

$SA = 4\pi r^2$

$SA = 4\pi \cdot 12^2$

$SA = 4\pi \cdot 144$

$SA = 576\pi \text{ in.}^2$

May 06, 2013