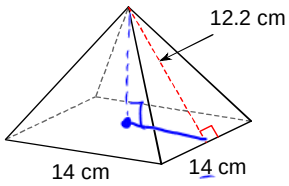
Math 9



# Pyramids and Spheres

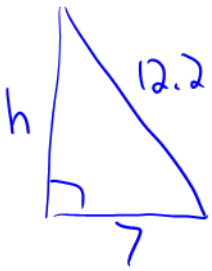
**Draw the net, find the surface area, and calculate the volume. Round to the nearest tenth.**

1)




Surface area needs slant

Volume needs height.




$s^2 = h^2 + r^2$

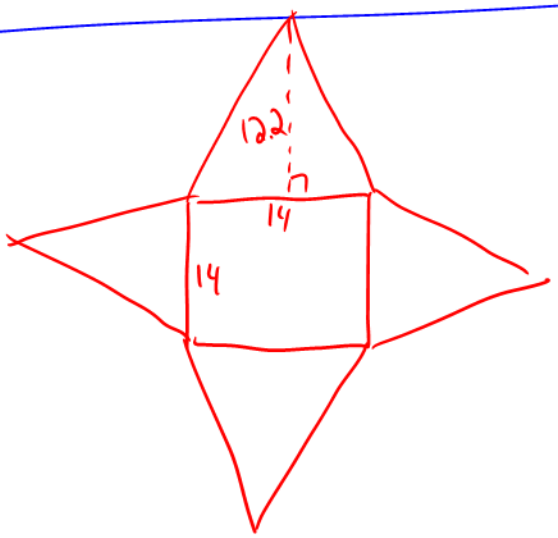
$(12.2)^2 = h^2 + (7)^2$

$148.84 = h^2 + 49$ (−49 −49)

$99.84 = h^2$

$\sqrt{99.84} = h$

$10_{cm} = h$




slant

$S.A. = b^2 + 4\left(\frac{bl}{2}\right)$

$S.A. = (14)^2 + 4\left(\frac{14 \times 12.2}{2}\right)$

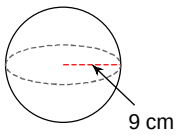
$S.A. = 196 + 4(85.4)$

$S.A. = 196 + 341.6$

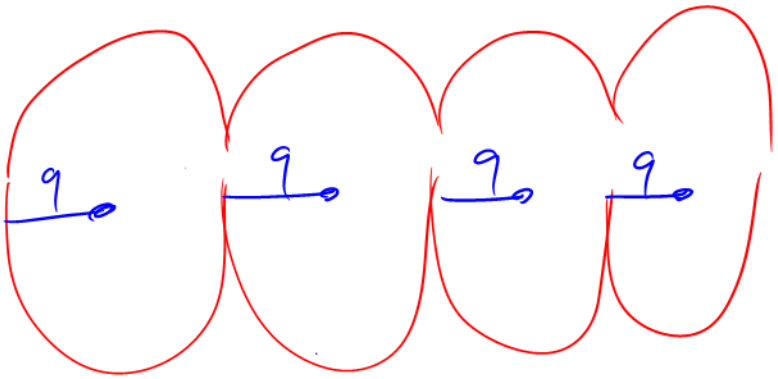
$SA = 537.6\ cm^2$

$V = \frac{b^2 h}{3} = \frac{(14)^2(10)}{3} = \frac{196 \times 10}{3} = \frac{1960}{3} = 653.3\ cm^3$

2)




$r = \frac{d}{2}$




$S.A. = 4\pi r^2$

$S.A. = 4(3.14)(\cancel{9}^{81})$

$S.A = 1017.36 cm^2$

Volume of two cones = volume of sphere

interesting fact.

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

$V = \frac{4(3.14)(\cancel{9}^{729})}{3}$

$V = \frac{9156.24}{3}$

$V = 3052.08 cm^3$