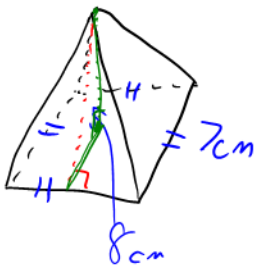
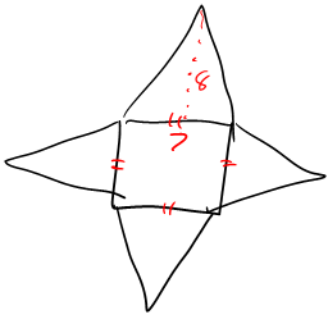
9.4 Pyramids and Spheres pg 492

1.





$$SA = s^2 + 4\left(\frac{bh}{2}\right)$$

$$SA = 7^2 + 2(7)(8)$$

$$SA = 49 + 112$$

$$SA = 161\,cm^2$$

Volume requires height of pyramid.

$$h^2 + \left(\frac{b}{2}\right)^2 = s^2$$

$$h^2 + (3.5)^2 = 8^2$$

$$h^2 + 12.25 = 64 \quad (-12.25)$$

$$\sqrt{h^2} = \sqrt{51.75}$$

$$h = 7.2\,cm$$

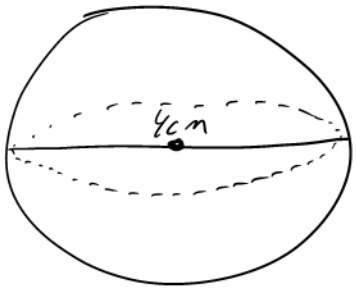
$$V = \frac{lwh}{3}$$

$$V = \frac{(7)(7)(7.2)}{3}$$

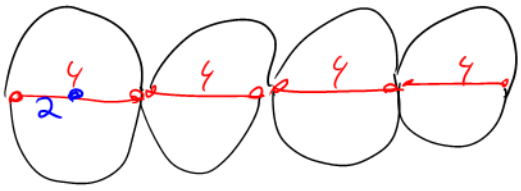
$$V = \frac{352.8}{3}$$

$$V = 117.6\,cm^3$$

3.



Net:



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

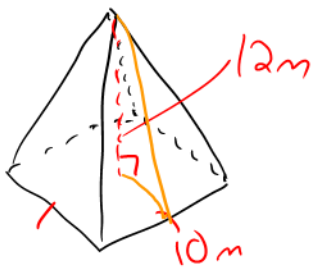
$$= 4(3.14)(2)^2$$

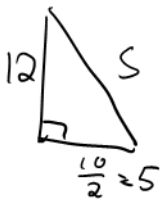
$$= 50.24\,cm^2$$

Volume: $V = \frac{4\pi r^3}{3} = \frac{4(3.14)(2)^3}{3} = \frac{100.48}{3} = 33.9\,cm^3$

Do 6 and 8 on the board .... only volume. pg 492

9.





$h^2 + \left(\frac{b}{2}\right)^2 = s^2$

$12^2 + 5^2 = s^2$

$144 + 25 = s^2$

$\sqrt{169} = \sqrt{s^2}$

$13 = s$

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

$V = \frac{(10)(10)(12)}{3}$

$V = 400\ m^3$

$SA = b^2 + 4\left(\frac{bh}{2}\right)$

$SA = 10^2 + 2(10)(13)$

$= 100 + 260$

$= 360\ m^2$