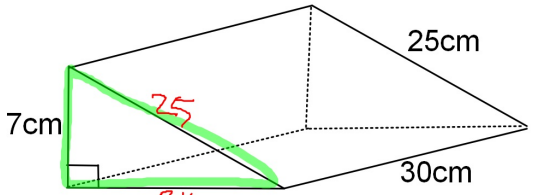
Bellwork, Tuesday, May 20, 2014

Find the Surface Area of each Prism. Round to the nearest hundredth when necessary.

1. Right Triangular Prism



$B = \frac{1}{2}bh = \frac{1}{2}(7)(24) = 84$

$SA = LA + 2B$

$1680 + 2(84)$

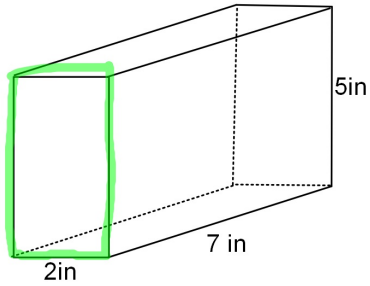
$1848\ cm^2$

$LA = p \cdot h$

$(56)(30)$

1680

2. Rectangular Prism.



$B = bh = 2(5) = 10$

$SA = LA + 2B$

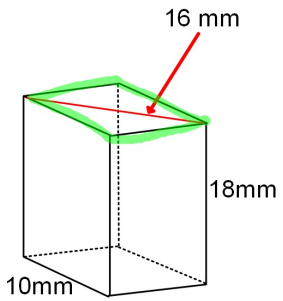
$98 + 2(10)$

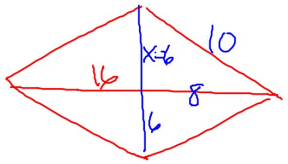
$= 118\ in^2$

$LA = p \cdot h$

$(14)(7) = 98$

3. Rhomboidal Prism.





$B = \frac{1}{2}(d)(d)$

$\frac{1}{2}(16)(12) = 96$

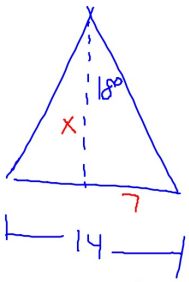
$SA = LA + 2B$

$720 + 2(96) = 912\ mm^2$

$LA = p \cdot h$

$(40)(18) = 720$

4. Bases are Regular Decagons whose sides are 14 inches long. The height of the prism is 9 inches.



$\tan 18 = \frac{7}{x}$

$x = 21.54$

$B = \frac{1}{2}ap$

$= \frac{1}{2}(21.54)(140) = 1507.8$

$SA = LA + 2B$

$1260 + 2(1507.8)$

$= 4275.6\ in^2$

$LA = ph$

$= (140)(9) = 1260$