


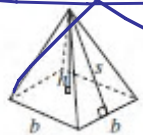
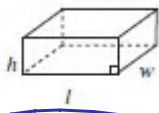
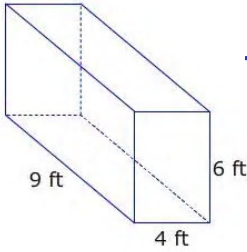


Geometric Solid	Surface Area	Volume
Cylinder 	$A_{top} = \pi r^2$ $A_{base} = \pi r^2$ $A_{side} = 2\pi rh$ $SA = 2\pi r^2 + 2\pi rh$	$V = (\text{area of base}) \times h$
Sphere 	$SA = 4\pi r^2$ or $SA = \pi d^2$	$V = \frac{4}{3}\pi r^3$
Cone 	$A_{side} = \pi rs$ $A_{base} = \pi r^2$ $SA = \pi r^2 + \pi rs$	$V = \frac{1}{3} \times (\text{area of base}) \times h$
Square-Based Pyramid 	 $A_{triangle} = \frac{1}{2}bs$ (for each triangle) $A_{base} = b^2$ $SA = 2bs + b^2$ 	 $V = \frac{1}{3} \times (\text{area of base}) \times h$
Rectangular Prism 	$SA = wh + wh + lw + lw + lh + lh$ or $SA = 2(wh + lw + lh)$	$V = (\text{area of base}) \times h$
General Right Prism	$SA = \text{the sum of the areas of all the faces}$	$V = (\text{area of base}) \times h$
General Right Pyramid	$SA = \text{the sum of the areas of all the faces}$	$V = \frac{1}{3} \times (\text{area of base}) \times h$

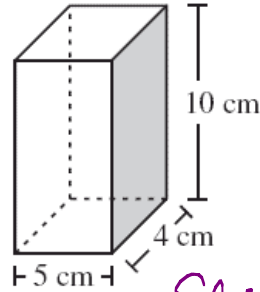
Using the formula's on the previous sheet, solve the following questions:

1.



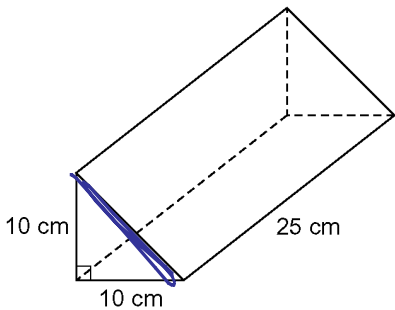
$$\begin{aligned}
 SA &= 2(lw + lh + lw) \\
 &= 2(4 \times 6 + 9 \times 4 + 9 \times 6) \\
 &= 2(24 + 36 + 54) \\
 &= 2(114) \\
 &= 228 \text{ ft}^2
 \end{aligned}$$

2.



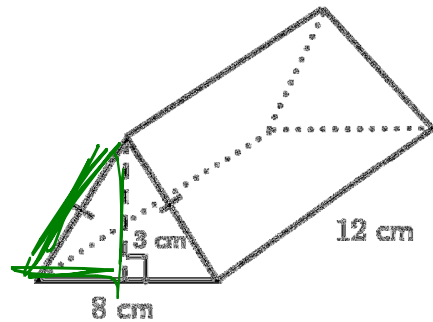
$$\begin{aligned}
 SA &= 2(lw + lh + lw) \\
 &= 2(5 \times 4 + 4 \times 10 + 10 \times 5) \\
 &= 2(20 + 40 + 50) \\
 &= 2(110) \\
 &= 220 \text{ cm}^2
 \end{aligned}$$

3.

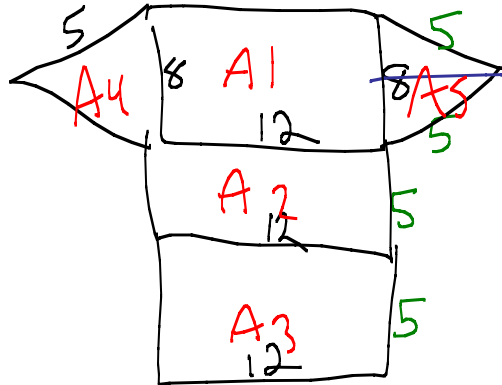


$$\begin{aligned}
 c^2 &= a^2 + b^2 \\
 c^2 &= 3^2 + 4^2 \\
 &= 9 + 16 \\
 \sqrt{c^2} &= \sqrt{25} \\
 c &= 5
 \end{aligned}$$

4.



$$\begin{aligned}
 A_1 &= l \times w \\
 &= 12 \times 8 \\
 &= 96 \text{ cm}^2 \\
 A_2 &= l \times w \\
 &= 12 \times 5 \\
 &= 60 \text{ cm}^2 \\
 A_3 &= 60 \text{ cm}^2
 \end{aligned}$$



$$\begin{aligned}
 A_4 &= \frac{b \times h}{2} = \frac{8 \times 3}{2} \\
 &= \frac{24}{2} = 12 \text{ cm}^2 \\
 A_5 &= 12 \text{ cm}^2
 \end{aligned}$$

$$\begin{aligned}
 A_T &= 60 + 60 + 12 + 12 + 96 \\
 &= 240 \text{ cm}^2
 \end{aligned}$$