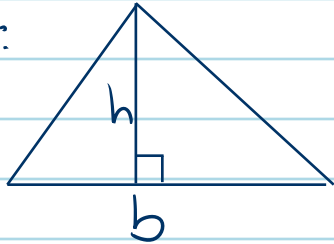


May.18th, 2016

Unit 5 Day 12

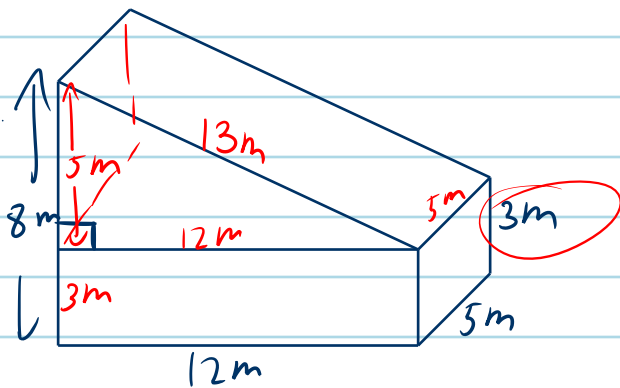
5-8 Composite Objects

Triangle:



$$A = \frac{1}{2}bh = \frac{bh}{2}$$

1) Find the surface area of the object below:



Pythagorean Theorem:

$$a^2 + b^2 = c^2$$

$$c^2 = 5^2 + 12^2$$

$$c^2 = 25 + 144$$

$$c^2 = 169$$

$$c = 13$$

Triangular Prism: $F+B = \frac{1}{2}(12)(5)2 = 60$

$$L = 5 \cdot 5 = 25$$

$$T = 5 \cdot 13 = 65$$

$$\underline{150 \text{ (no bottom!)}}$$

Rectangular Prism: $F+B : 12 \cdot 3 \cdot 2 = 72$

$$L+R : 3 \cdot 5 \cdot 2 = 30$$

$$B : 12 \cdot 5 = \underline{60 \text{ (no top!)}}$$

$$162$$

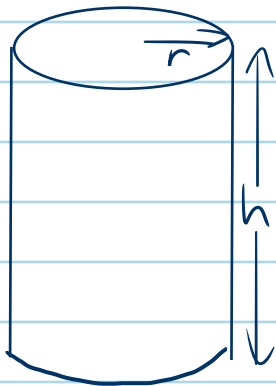
Combined: 150

$$162$$

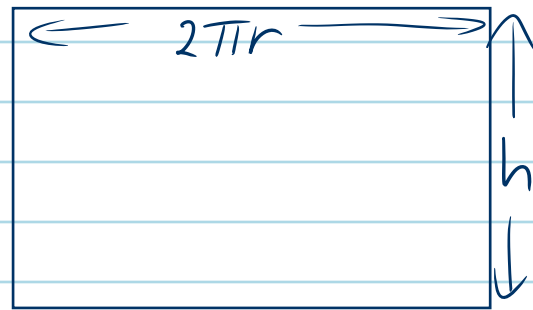
$$\underline{312 \text{ m}^2}$$

Cylinder

Area: 2 circles + rectangle



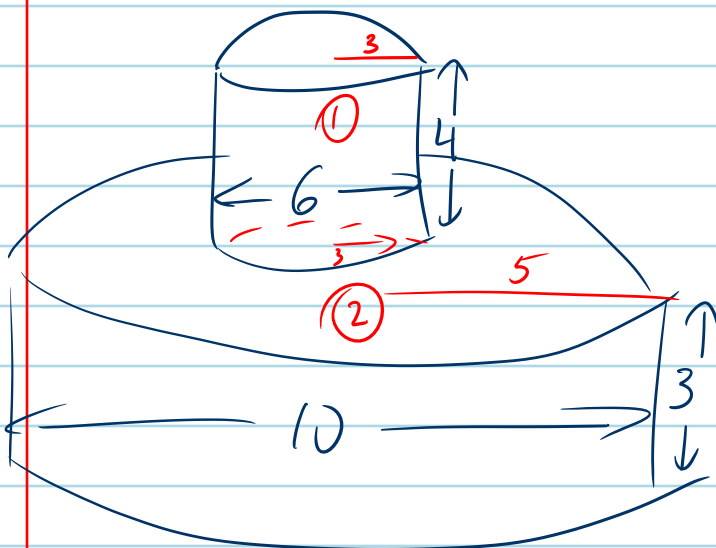
$$2\pi r^2$$



$$2\pi r h$$

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

2) Find the surface area of the object below:



$$SA_1 = 2\pi r^2 + 2\pi r h$$

$$SA_1 = 2\pi(3)^2 + 2\pi(3)(4)$$

$$= 2\pi(9) + 24\pi$$

$$= 18\pi + 24\pi$$

$$= 42\pi$$

$$SA_2 = 2\pi r^2 + 2\pi r h$$

$$= 2\pi(5)^2 + 2\pi(5)(3)$$

$$= 2\pi(25) + 2\pi(15)$$

$$= 50\pi + 30\pi$$

$$= 80\pi$$

$$\begin{aligned} \text{Shared Area} &= 2\pi r^2 \\ &= 2\pi(3)^2 \\ &= 18\pi \end{aligned}$$

$$42\pi$$

$$+ 80\pi$$

$$- 18\pi$$

$$\text{Net Area } 104\pi$$

Practice Day 12