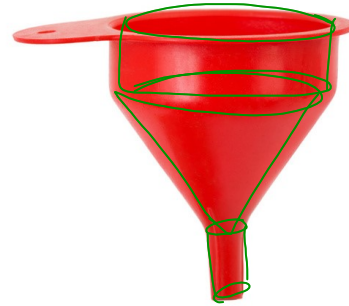
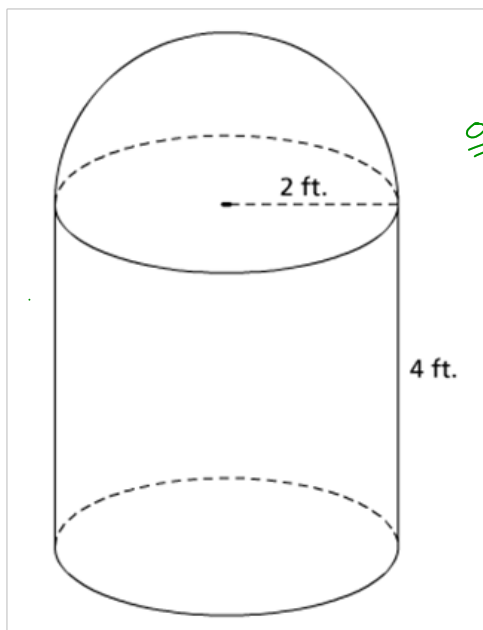


Composite objects

an object made up of two or more distinct shapes



Ex 1) Find the surface area and volume of the grain silo.



$$SA = \overset{\text{bottom}}{\pi r^2} + \overset{\text{side}}{2\pi r h} + \overset{\text{hemi-top}}{2\pi r^2}$$

or $SA = \underset{\text{hemi}}{3\pi r^2} + \underset{\text{sides cylinder}}{2\pi r h}$

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

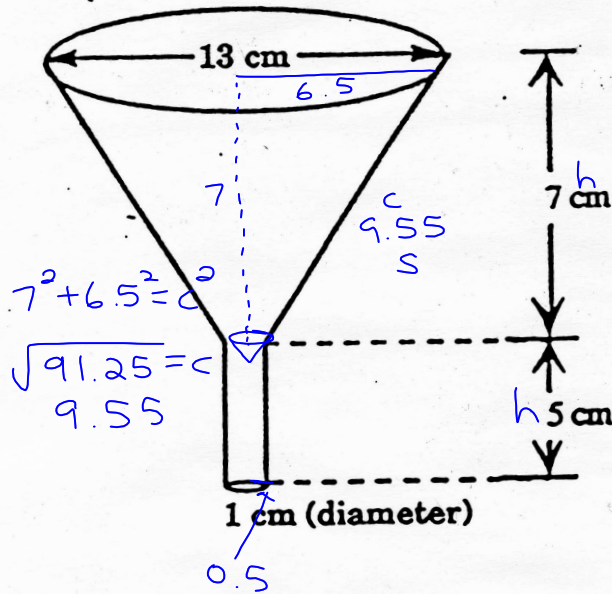
$$= 87.96 \text{ ft}^2$$

$$V = \pi r^2 h + \frac{2\pi r^3}{3}$$

$$= \pi(2)^2(4) + \frac{2\pi(2)^3}{3}$$

$$= 67.02 \text{ ft}^3$$

Ex 2) Find the surface area and volume of the funnel:



lateral cone + lateral cylinder

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

$$= \pi(6.5)(9.55) + 2\pi(0.5)(5)$$

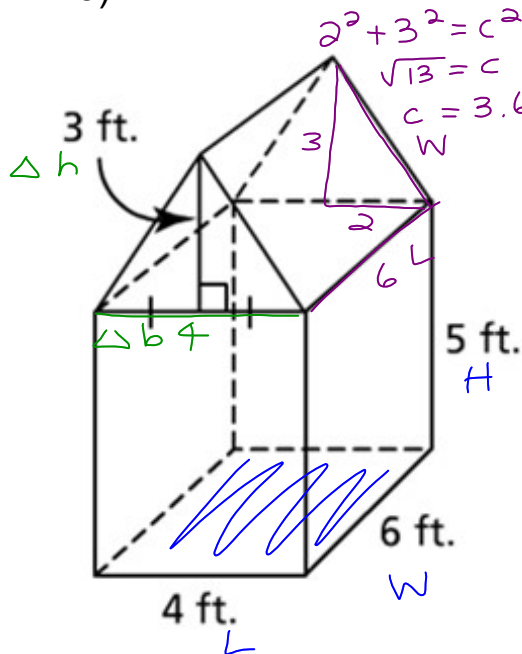
$$= 210.72 \text{ cm}^2$$

$$V = \frac{\pi r^2 h}{3} + \pi r^2 h$$

$$= \frac{\pi(6.5)^2(7)}{3} + \pi(0.5)^2(5)$$

$$= 313.64 \text{ cm}^3$$

Ex 3) Find the surface area and volume of the tool shed:



prism (no top)

$$SA = LW + 2LH + 2WH$$

$$+ \frac{1}{2} \text{ prism}$$

$$2LW + 2 \frac{(bh)}{2}$$

rectangles triangles

$$= (4)(6) + 2(4)(5) + 2(6)(5) + 2(6)(3.61) + (4)(3)$$

$$= 179.32 \text{ ft}^2$$

$$V = LW H + \frac{LWH}{2}$$

$$= (4)(6)(5) + \frac{(4)(6)(3)}{2}$$

$$= 156 \text{ ft}^3$$

Composite WS
#1-4