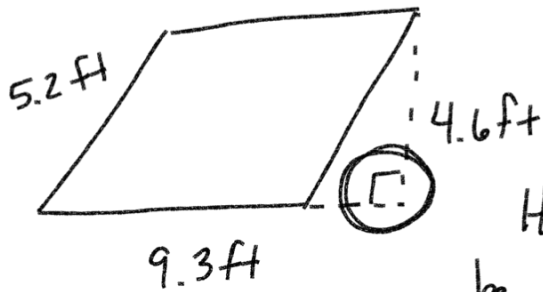


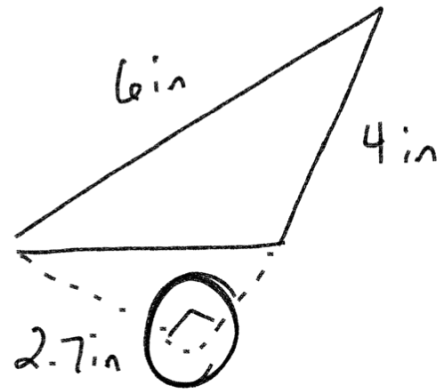
1.)



$$A = bh$$

$$(9.3 \text{ ft})(4.6 \text{ ft}) = \boxed{42.8 \text{ ft}^2}$$

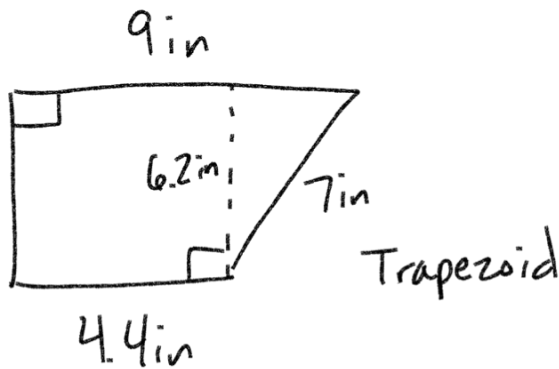
2.)



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

$$= \frac{1}{2}(4 \text{ in})(2.7 \text{ in}) = \boxed{5.4 \text{ in}^2}$$

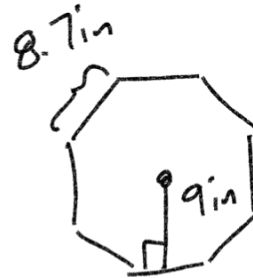
3.)



$$A = \frac{(b_1 + b_2)}{2}h$$

$$\left(\frac{4.4 \text{ in} + 9 \text{ in}}{2}\right)(6.2 \text{ in}) = \boxed{41.5 \text{ in}^2}$$

4.)



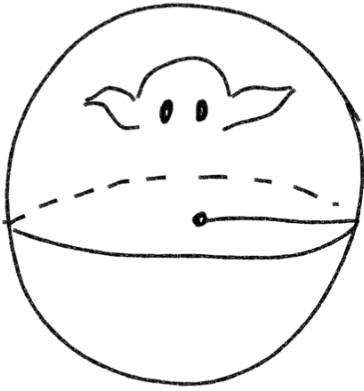
Regular Octagon

$$A = \left(\frac{1}{2}\right)(n * s)(\text{apothem})$$

$$\downarrow \frac{1}{2}(8 * 8.7 \text{ in})(9 \text{ in})$$

$$\boxed{313.2 \text{ in}^2}$$

5.)



$$r = 2.3 \text{ in}$$

Volume = ?

$$V = \frac{4}{3} \pi r^3$$

$$= \frac{4}{3} \pi (2.3)^3 = \boxed{51 \text{ in}^3}$$

Volume of a Prism

Cylinder

Volume = (Area of the base) height



base

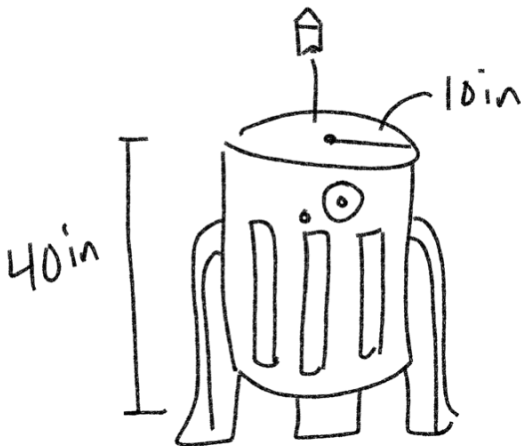
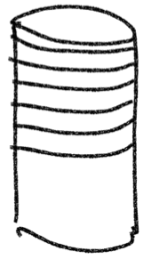
circle \rightarrow area of circle $\rightarrow \pi r^2$

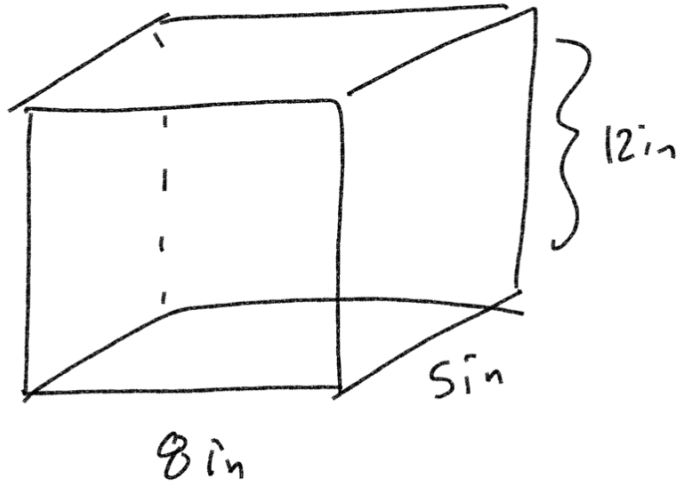
$$V = \pi r^2 h$$

$$V = \pi (10 \text{ in})^2 (40 \text{ in})$$

$$4000 \pi \text{ in}^3$$

$$\boxed{12566.4 \text{ in}^3}$$





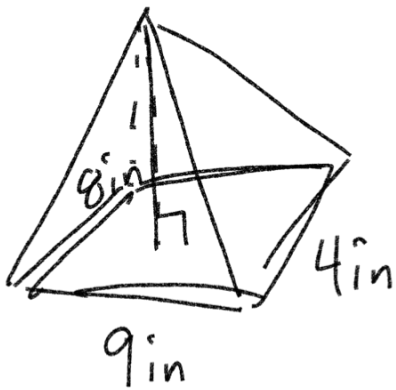
$$V = (\text{Area of Base}) \text{Height}$$

$$L * W * H$$

$$(5 \text{ in})(8 \text{ in})(12 \text{ in})$$

$$\boxed{480 \text{ in}^3}$$

Rectangular Pyramid

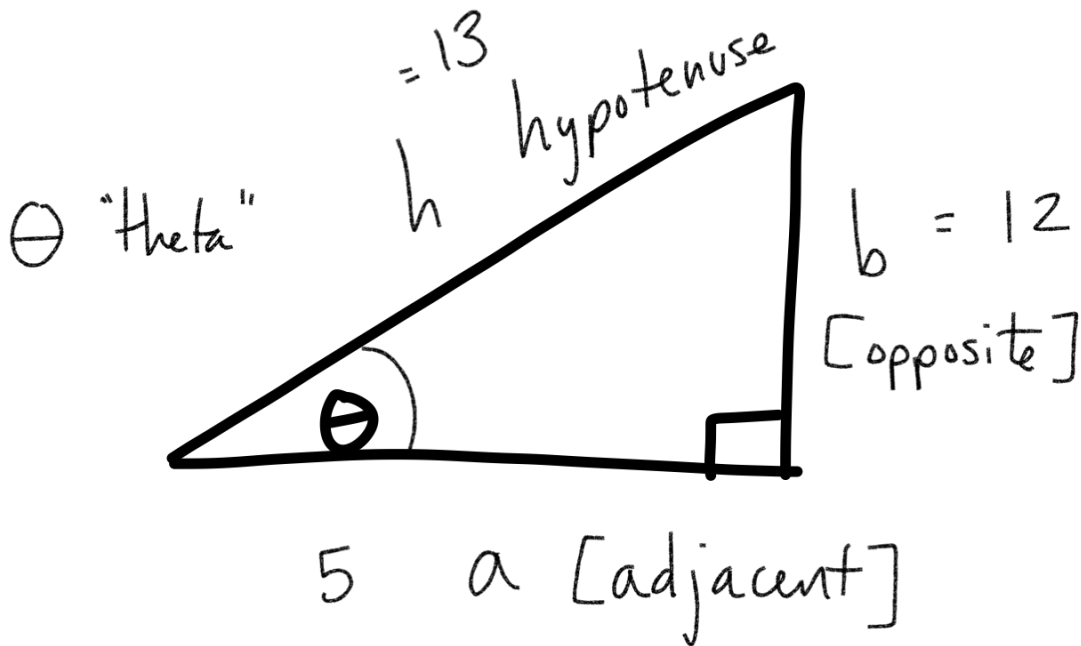


$$V = \frac{1}{3} (\overset{\text{area}}{\text{base}}) (\text{height})$$

$$\frac{1}{3} (9 \text{ in})(4 \text{ in})(8 \text{ in})$$

$$\boxed{96 \text{ in}^3}$$

Trigonometric Ratios (Right Triangles)



Sine (sin)

$$\sin \theta = \frac{\text{opposite}}{\text{hypotenuse}} = \frac{12}{13}$$

Cosine (cos)

$$\cos \theta = \frac{\text{adjacent}}{\text{hypotenuse}} = \frac{5}{13}$$

tangent (tan)

$$\tan \theta = \frac{\sin \theta}{\cos \theta} = \frac{\frac{\text{opp}}{\text{hyp}}}{\frac{\text{adj}}{\text{hyp}}}$$

$$\frac{\text{opp}}{\text{hyp}} \div \frac{\text{adj}}{\text{hyp}}$$

$$\tan \theta = \frac{\text{opp}}{\text{adj}}$$

$$\frac{\text{opp}}{\text{hyp}} \times \frac{\text{hyp}}{\text{adj}} = \frac{\text{opp}}{\text{adj}}$$

SOH

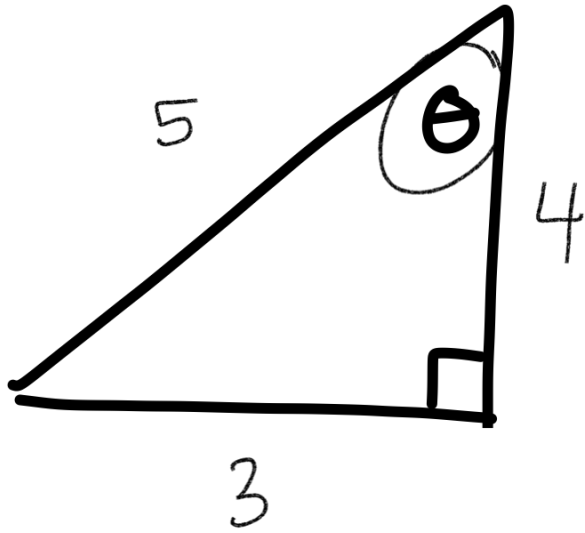
CAH

TOA

$$\underline{\sin} = \frac{\underline{\text{opp}}}{\underline{\text{hyp}}}$$

$$\underline{\cos} = \frac{\underline{\text{adj}}}{\underline{\text{hyp}}}$$

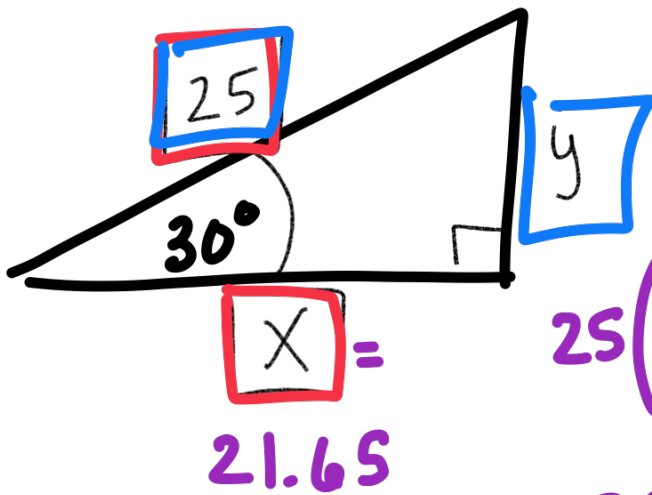
$$\underline{\tan} = \frac{\underline{\text{opp}}}{\underline{\text{adj}}}$$



$$\cos \theta = \frac{4}{5}$$

$$\tan \theta = \frac{3}{4}$$

$$\sin \theta = \frac{3}{5}$$



$$\cos = \frac{\text{adj}}{\text{hyp}}$$

$$25 (\cos 30^\circ) = \left(\frac{X}{25} \right) 25$$

$$25 \cos 30^\circ = X$$

$$X = 21.65$$

$$25 (\sin 30^\circ) = \left(\frac{y}{25} \right) 25$$

$$y = 25 \sin 30^\circ = 12.5$$