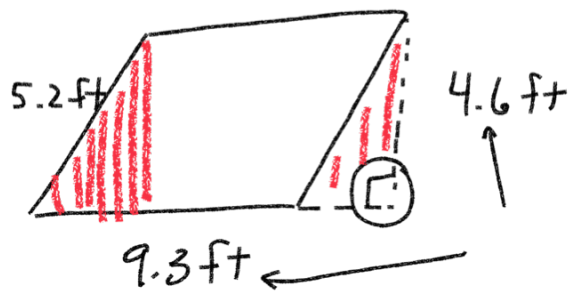


T-G Geometry Week 30 5/2

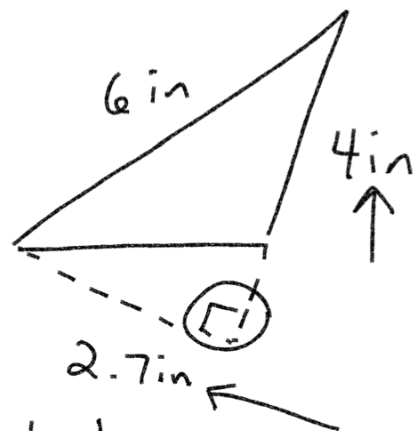
1.)



$$A = bh$$

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

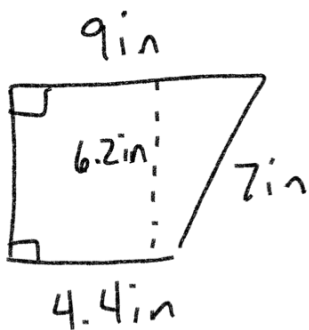
2.)



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

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

3.)

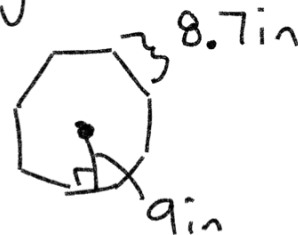


$$A = \left(\frac{b_1 + b_2}{2} \right) h$$

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

$$= \boxed{41.5 \text{ in}^2}$$

4.) Regular Octagon

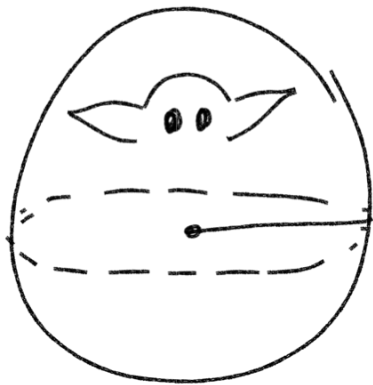


$$A = \frac{1}{2} (\text{perimeter})(\text{apothem})$$

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

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

5.)



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

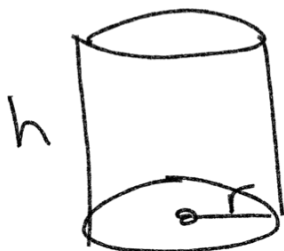
$$V = \frac{4}{3} \pi r^3$$

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

$$= \boxed{50.97 \text{ in}^3}$$

Volume of a Prism
(Cylinder)

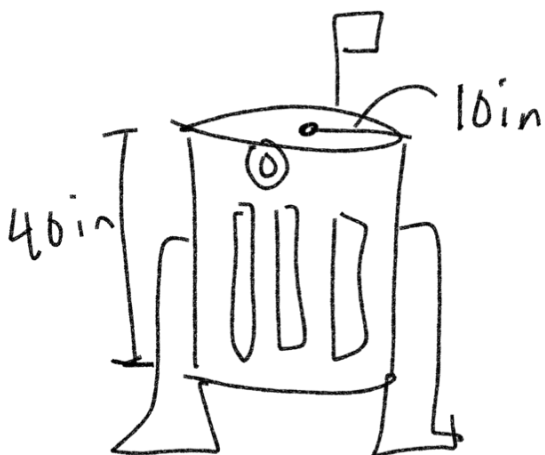
$$\text{Volume} = (\text{Area of Base})(\text{Height})$$



Base: Circle

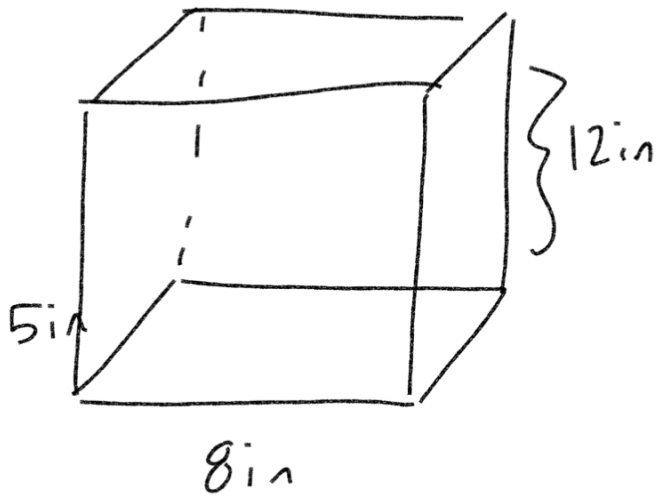
$$\text{Area} = \pi r^2$$

$$\text{Vol of cylinder} = \pi r^2 h$$



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

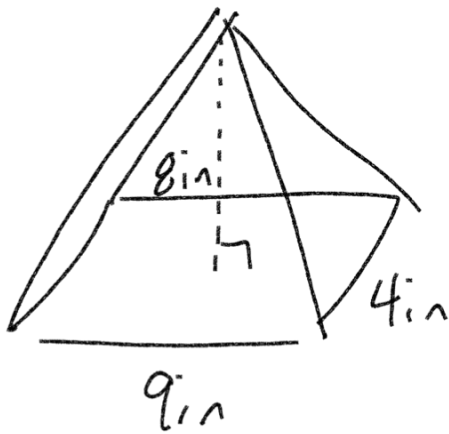
$$\pi (10 \text{ in})^2 (40 \text{ in})$$
$$= \boxed{12566.4 \text{ in}^3}$$



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

$$L * W * H$$

$$\begin{array}{ccc} \downarrow & \downarrow & \downarrow \\ (5 \text{ in}) & (8 \text{ in}) & (12 \text{ in}) \\ \hline & & 480 \text{ in}^3 \end{array}$$



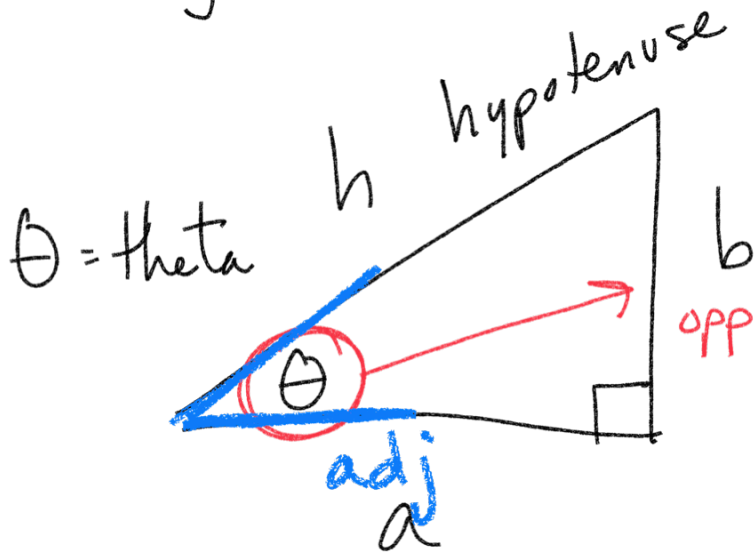
Rectangular Pyramid

$$V = \frac{1}{3} (\text{Base}) (\text{height})$$

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

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

Trigonometric Ratios (Right Triangles)



Sine

$$\sin \theta = \frac{\text{opposite}}{\text{hypotenuse}} = \frac{b}{h}$$

Cosine

$$\cos \theta = \frac{\text{adjacent}}{\text{hypotenuse}} = \frac{a}{h}$$

$$\tan \theta = \frac{\sin \theta}{\cos \theta}$$

$$\frac{\frac{b}{h}}{\frac{a}{h}}$$

tangent

$$\tan \theta = \frac{\text{opposite}}{\text{adjacent}} = \left(\frac{b}{a}\right)$$

$$\frac{b}{h} \div \frac{a}{h}$$

$$\frac{b}{h} * \frac{h}{a} = \left(\frac{b}{a}\right)$$

Keep
Change
Flip

SIN

SOH

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

COS

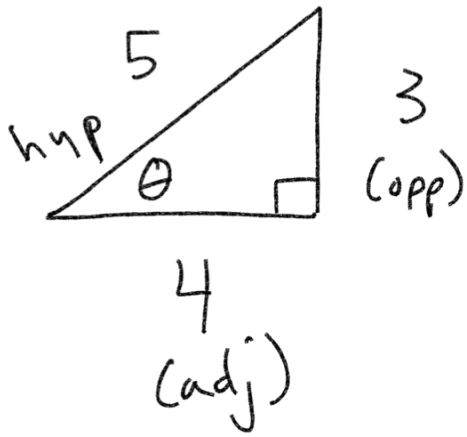
CAH

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

TAN

TOA

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



$$\cos \theta = \frac{\text{adj}}{\text{hyp}} = \boxed{\frac{4}{5}}$$

$$\tan \theta = \frac{\text{opp}}{\text{adj}} = \boxed{\frac{3}{4}}$$

$$\sin \theta = \frac{\text{opp}}{\text{hyp}} = \boxed{\frac{3}{5}}$$