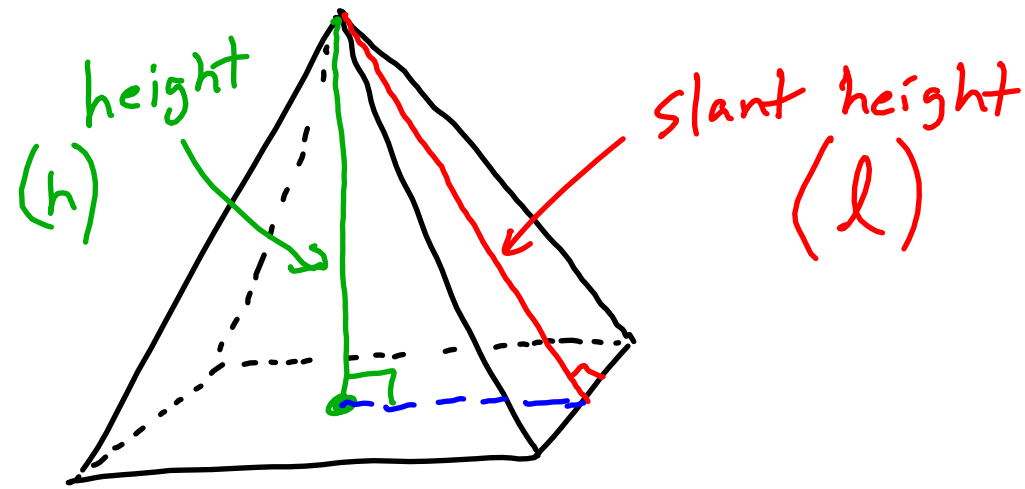


Surface Area/Volume of Pyramids/Cones



- pyramid \rightarrow lateral faces are triangles

\hookrightarrow defined by shape of base

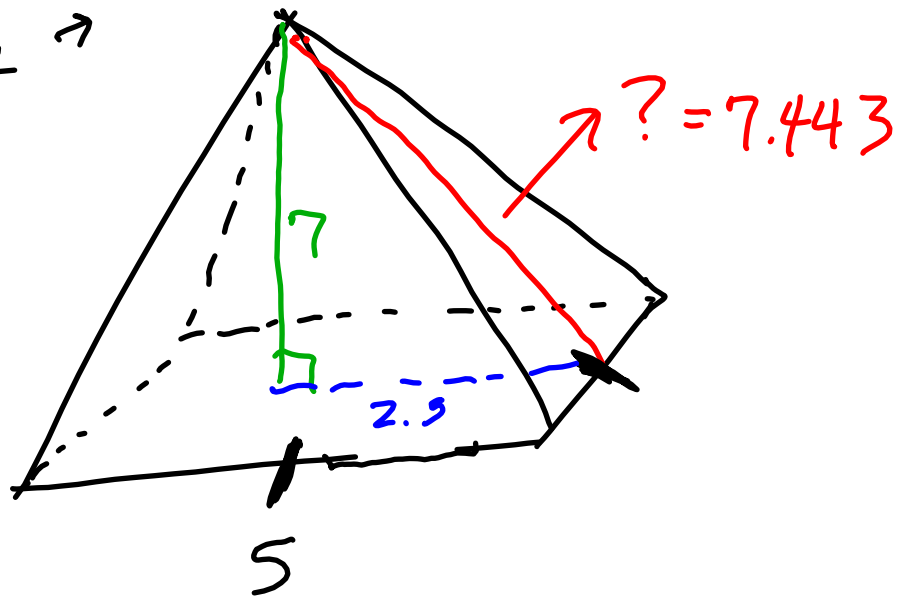
EX \rightarrow rectangular pyramid

$$\begin{aligned} \text{Lateral Area} &= \frac{1}{2} \cdot \text{perimeter of base} \cdot \text{slant height} \\ &= \frac{1}{2} P l \end{aligned}$$

$$\text{Surface Area} = \text{Lateral Area} + \text{Area of Base} = LA + B$$

$$\text{Volume} = \frac{1}{3} \cdot \text{Area of Base} \cdot \text{Height} = \frac{1}{3} \cdot B \cdot h$$

EX →

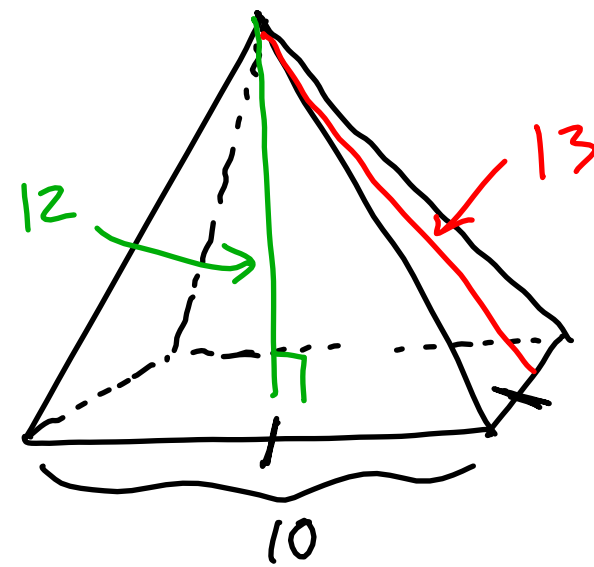


$$LA = \frac{1}{2} (20) (7.443) = 74.43 \text{ u}^2$$

$$SA = 74.43 + 25 = 99.43 \text{ u}^2$$

$$V = \frac{1}{3} (25) (7) = \frac{175}{3} = 58.\overline{3} \text{ u}^3$$

EX →

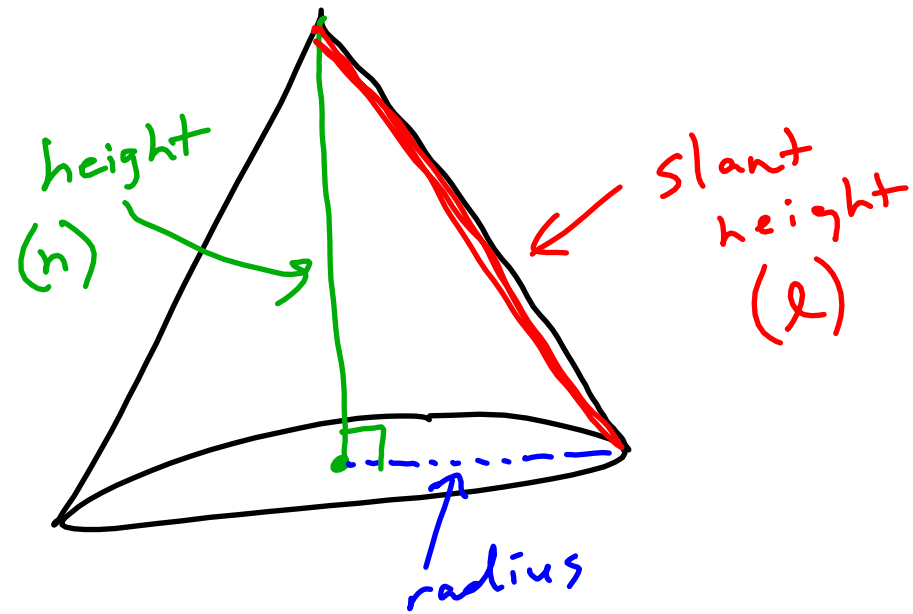


$$LA = \frac{1}{2} (40) (13) = 260 \text{ u}^2$$

$$SA = 260 + 100 = 360 \text{ u}^2$$

$$V = \frac{1}{3} (100) (12) = 400 \text{ u}^3$$

- Cone



$$\begin{aligned} \text{Lateral Area} &= \frac{1}{2} \cdot \text{Circumference} \cdot \text{Slant Height} \\ &= \frac{1}{2} \pi d l = \pi r l \end{aligned}$$

$$\begin{aligned} \text{Surface Area} &= \text{Lateral Area} + \text{Area of Base} \\ &= LA + \pi r^2 \end{aligned}$$

$$\text{Volume} = \frac{1}{3} \pi r^2 h$$

HW : p. 713 → 10-28 even (omit 24)
p. 729 → 6-24 even (omit 18)