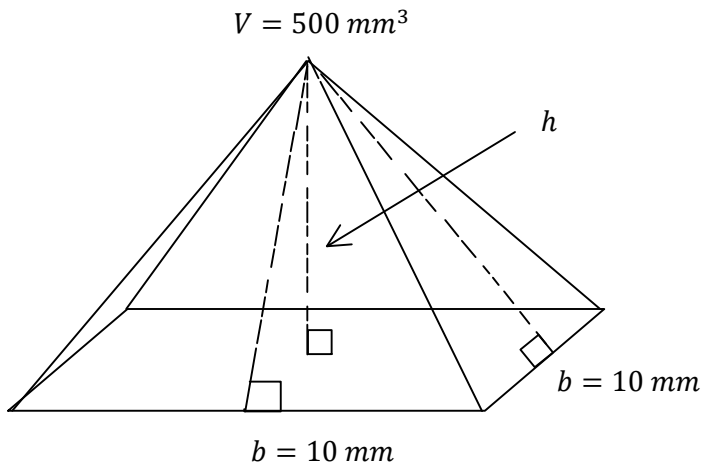


M10 - 2.4 - Volume/Surface Area Missing Length Notes

Find the missing length for the shapes below.



$$V = \frac{1}{3} \times (\text{area of base}) \times h$$

$$V = \frac{1}{3} \times (l \times w) \times h$$

$$500 = \frac{1}{3} \times 10 \times 10 \times h$$

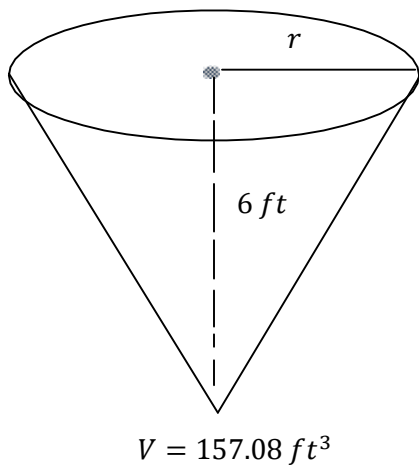
$$500 = \frac{100h}{3}$$

$$3 \times 500 = \frac{100h}{3} \times 3$$

$$1500 = 100h$$

$$\frac{1500}{100} = \frac{100h}{100}$$

$$h = 15 \text{ mm}$$



$$V = \frac{1}{3} \times (\text{area of base}) \times h$$

$$V = \frac{1}{3} \times (\pi r^2) \times h$$

$$157.08 = \frac{1}{3} \times ((3.14)r^2) \times 6$$

$$157.08 = 6.28r^2$$

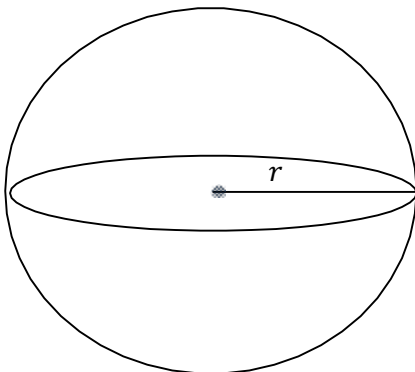
$$\frac{157.08}{6.28} = \frac{6.28r^2}{6.28}$$

$$25 = r^2$$

$$\sqrt{25} = r$$

$$r = 5 \text{ ft}$$

$SA = 196\pi \text{ in}^2$ Terms of pie



$$SA = 4\pi r^2$$

$$196\pi = 4\pi r^2$$

$$\frac{196\pi}{4} = \frac{4\pi r^2}{4}$$

$$\frac{\pi}{4} = \frac{\pi}{4}$$

$$49 = r^2$$

$$\sqrt{49} = r$$

$$r = 7 \text{ in}$$