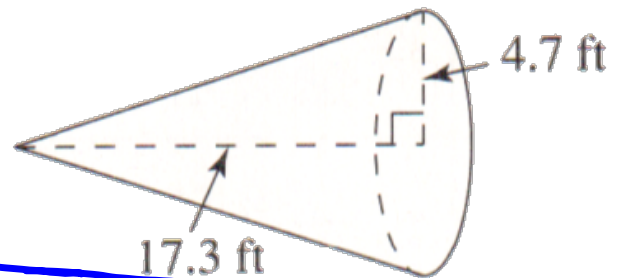


 <https://www.youtube.com/watch?v=O2wenAlf0H8&t=64s>

Cone

$$V = \frac{1}{3} Bh$$



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

$$\frac{1}{3} (3.14) (4.7)^2 (17.3) = 399.99 \text{ ft}^3$$

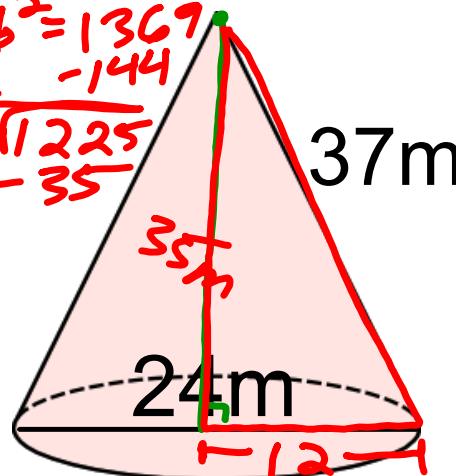
Find the volume.

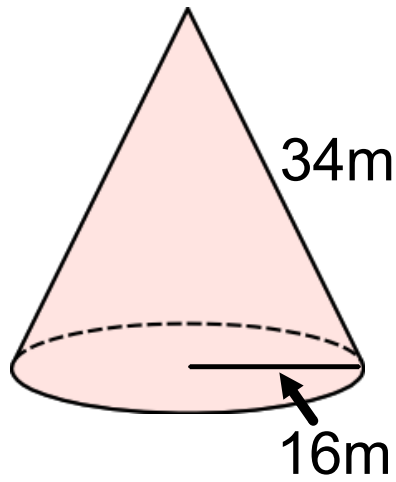
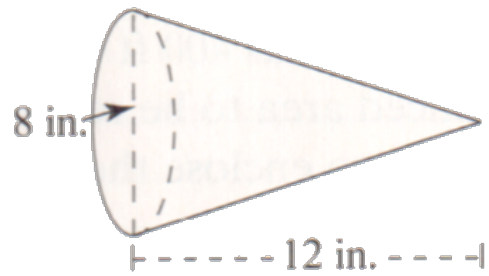
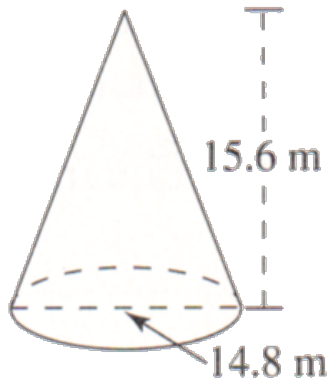
$$V = \frac{1}{3} \pi r^2 h$$

$$\frac{1}{3} (3.14) (12)^2 (35)$$

$$5275.2 \text{ m}^3$$

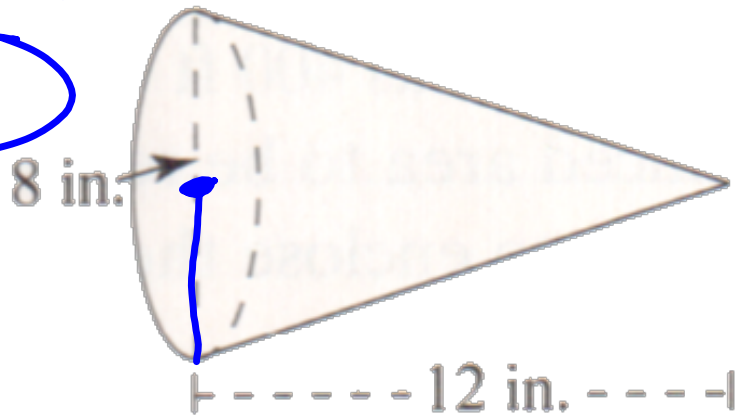
$$\begin{aligned} 12^2 + b^2 &= 37^2 \\ 144 + b^2 &= 1369 \\ -144 &\quad -144 \\ \hline b^2 &= 1225 \\ b &= 35 \end{aligned}$$





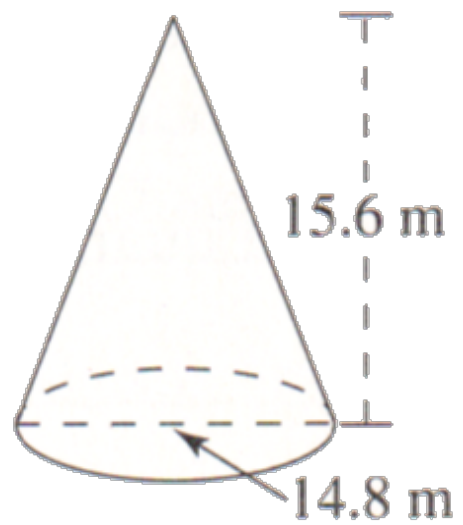
$$\frac{1}{3} (3.14)(4)^2 (12)$$

$$200.96 \text{ in}^3$$



$$\frac{1}{3}(3.14)(7.4)^2(15.6)$$

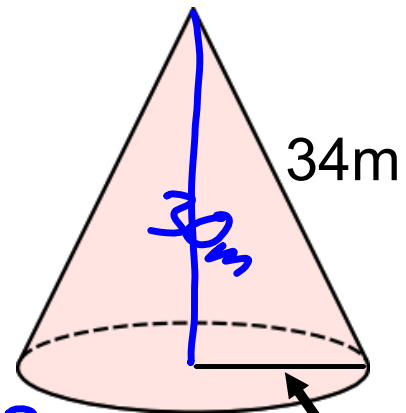
$$894.12 \text{ m}^3$$



$$\frac{1}{3}(3.14)(16)^2(30)$$

$$8038.4 \text{ m}^3$$

$$(1 \div 3) \times 3.14 \times 16^2 \times 30$$



$$\begin{aligned} 16^2 + b^2 &= 34^2 \\ 256 + b^2 &= 1156 \\ -256 & \quad -256 \\ \hline \sqrt{900} & \quad b = 30 \end{aligned}$$

Formulas

	SA	V
Cylinder	$2\pi r^2 + 2\pi rh$	$\pi r^2 h$
Cone	$\pi r^2 + \pi r l$	$\frac{1}{3}\pi r^2 h$
Sphere	$4\pi r^2$	$\frac{4}{3}\pi r^3$

A tennis ball is 2.65in in diameter. Find the surface area and volume.



$$\text{SA) } 4\pi r^2$$

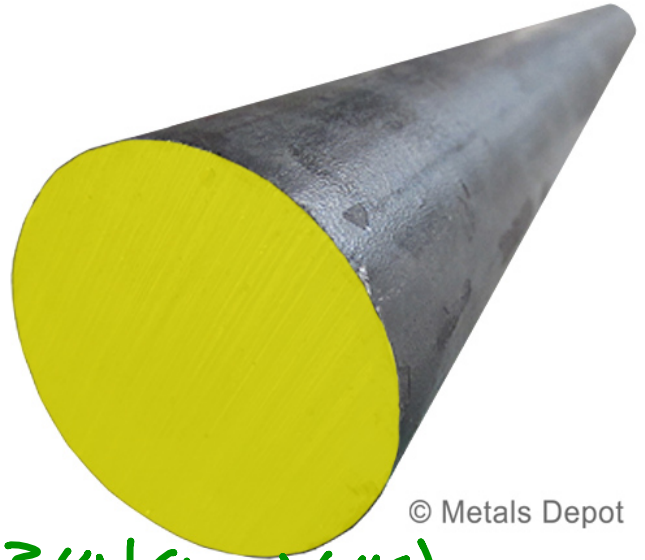
$$4(3.14)(1.325)^2 = 22.05 \text{ in}^2$$

$$\text{V) } \frac{4}{3}(3.14)(1.325)^3 = 9.74 \text{ in}^3$$

Jim constructed a model of a volcano that is cone-shaped for his science project. It has a radius of 28cm and a height of 45cm. Find the volume.

$$\frac{1}{3} \pi r^2 h$$
$$\frac{1}{3} (3.14) (28)^2 (45)$$
$$36926.4 \text{ cm}^3$$

A metal shop just got a shipment of steel round bars that are 2.5in in diameter and 48in long. What is the surface area of each round bar?



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$$2\pi r^2 + 2\pi r h$$
$$2(3.14)(1.25)^2 + 2(3.14)(1.25)(48)$$
$$386.61 \text{ in}^2$$

