

$$1.) V = Bh$$



area of base
circle

$$\pi r^2 h$$

$$3.14 \cdot \underline{9}^2 \cdot 8$$

$$3.14 \cdot 81 \cdot 8$$

$$2034.72$$



$$= 2034.7 \text{ ft}^3$$

$$2.) V = Bh$$



$$\pi r^2 \cdot h$$

$$3.14 \cdot \underline{8}^2 \cdot 3$$

$$3.14 \cdot 64 \cdot 3$$

$$602.88$$



$$602.9 \text{ in}^3$$

$$3.) V = Bh = \frac{\pi r^2 \cdot h}{3}$$

$$\frac{3.14 \cdot 11^2 \cdot 10}{3}$$

1266.46

↑
1266.5 mm³

$$\frac{3.14 \cdot 121 \cdot 10}{3}$$

$$④ V = Bh = \frac{\pi r^2 \cdot h}{3}$$

$$\frac{3.14 \cdot 6^2 \cdot 4.8}{3}$$

$$\frac{3.14 \cdot 36 \cdot 4.8}{3}$$

$$= 180.88 \approx 180.9 \text{ f}^3$$

$$\textcircled{5} \quad V = \frac{4}{3} \pi r^3$$

$$\frac{4}{3} \cdot 3.14 \cdot \underline{25^3}$$

$$\frac{4}{3} \cdot 3.14 \cdot 15625$$

$$65416.7 \text{ cm}^3$$

$$\textcircled{6} \quad V = \frac{4}{3} \pi r^3$$

$$V = \frac{4}{3} \cdot 3.14 \cdot 17^3$$

$$\frac{4}{3} \cdot 3.14 \cdot 2023$$

$$V = 8469.6 \text{ mm}^3$$

$$\textcircled{7} \quad H=14$$

$$D=? = r=13$$

$$D=26$$

$$V=7433 \text{ in}^3$$

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

$$\begin{array}{r|l} V & \pi \quad r^2 \quad H \\ 7433 & = 3.14 \cdot r^2 \cdot 14 \\ \hline 7433 & = 43.96 \cdot r^2 \\ \hline 43.96 & \\ \sqrt{169} & = r^2 \\ 13 & = r \end{array}$$

$$\textcircled{8} \quad V = \frac{Bh}{3} = \frac{\pi r^2 \cdot h}{3}$$

$$733 \quad | \quad \frac{3.14 \cdot r^2 \cdot 7}{3}$$

$$\hline 733 = \frac{21.98 \cdot r^2}{3}$$

$$\frac{733}{3} = 7.3 \cdot r^2$$

$$\frac{73}{3} = 7.3$$
$$100 = r^2 = \textcircled{10=r}$$

$$\textcircled{9} \quad V = \frac{9}{250} \pi m^3$$

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

$$\frac{\frac{9}{250} \pi}{\cancel{\pi}} = \frac{\frac{4}{3} \pi r^3}{\cancel{\pi}} = \frac{9}{250} = \frac{4}{3} r^3$$

$$\textcircled{\frac{3}{10} = r} \quad \frac{\sqrt[3]{27}}{\sqrt[3]{1000}} = r^3$$

$$\textcircled{10} \quad V = 4500 \pi m^3$$

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

$$4500 \pi = \frac{4}{3} \pi r^3$$

$$\frac{4500 \pi}{\cancel{\pi}} = \frac{4}{3} \pi r^3$$

$$\frac{4500}{\frac{4}{3}} = \frac{4}{3} r^3 = \sqrt[3]{3375} = r^3$$

$\textcircled{15 = r}$

①

Omit # 11

answer if you want know

increases by a factor of 12

$$\textcircled{2} \quad V = 125 \text{ in}^3$$

$$D = 4 \text{ in} \quad R = 2$$

$$H = ?$$

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

$$\frac{125}{125} = \frac{3.14 \cdot 2^2 \cdot h}{3.14 \cdot 4 \cdot h}$$

$$125 = 3.14 \cdot 4 \cdot h$$

$$\frac{125}{12.56} = h$$

$$h = 10$$

$$\textcircled{h = 10}$$

(B)

$$\frac{\text{Current Height}}{\text{Later Height}} = \left(\frac{10}{1}\right)^3 = 1,000$$

a.) no

$$V = 3.14 \cdot 1.625^2 \cdot 5$$

$$3.14 \cdot 2.640625 \cdot 5$$

$$V = 41.45$$

$$V = 41.5$$

$$V = 3.14 \cdot 0.5^2 \cdot 1.5$$

$$3.14 \cdot 0.25 \cdot 1.5$$

$$V = 1.2$$

b.)

$$41.5 \div 1.2$$

$$= 34.6 \text{ times}$$