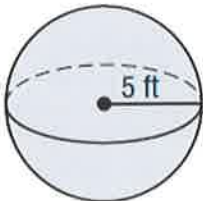
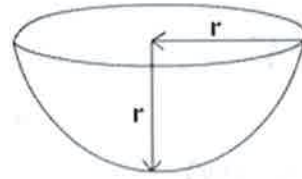
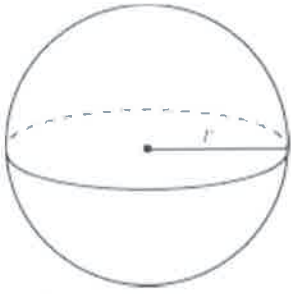


Volume of Spheres

Volume of Spheres = $\frac{4}{3}\pi r^3$

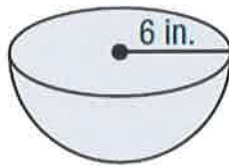
Volume of Hemisphere = $\frac{\text{Volume of Sphere}}{2}$



A) $r = 5$

$V = \frac{4}{3} \cdot \pi \cdot 5^3$

$V = 523.6 \text{ ft}^3$



B)

$V = \frac{4}{3} \pi (6)^3$

$V = 904.8$
2 ← half of Sphere

$V = 452.4 \text{ in}^3$



C)

$V = \frac{4}{3} \pi (16)^3$

$V = 8578.6 \text{ in}^3$

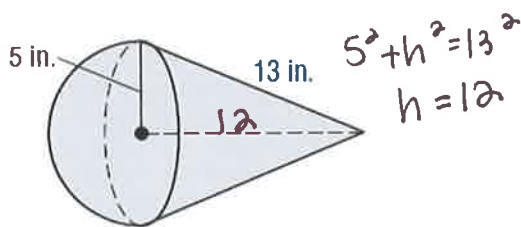


D)

$d = 8 \text{ cm}$
 $r = \frac{8}{2} = 4$

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

$V = 268.1 \text{ cm}^3$



E)

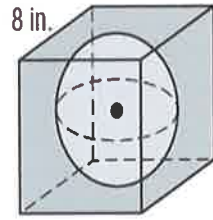
$V_{\text{hemi sphere}} = \frac{4}{3} \pi (5)^3$

$V = 261.8 \text{ in}^3$

$V_{\text{cone}} = \frac{1}{3} \pi (5)^2 (12)$

$V = 314.2 \text{ in}^3$

261.8
 $+ 314.2$
 $\hline 576 \text{ in}^3$



F)

difference between volume of cube and volume of sphere

$V_{\text{prism}} = 8 \cdot 8 \cdot 8 = 512$

$V_{\text{sphere}} = \frac{4}{3} \pi (4)^3$

$V = 268.1$

512
 $- 268.1$
 $\hline 243.9 \text{ in}^3$

The circumference of the sphere is 38 meters.

$$C = 2\pi r$$

$$38 = 2\pi r$$

$$\frac{38}{2\pi} = r$$

$$r = 6.0 \text{ m}$$

$$V = \frac{4}{3} \cdot \pi \cdot 6^3$$

$$V = 904.8 \text{ m}^3$$