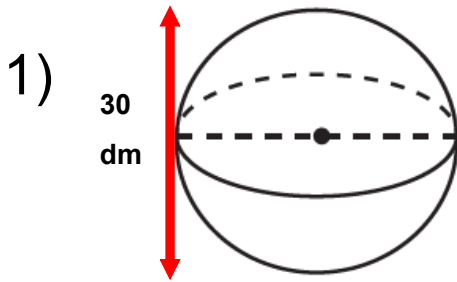


## Volume of a Sphere

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

Find the volume of the following:



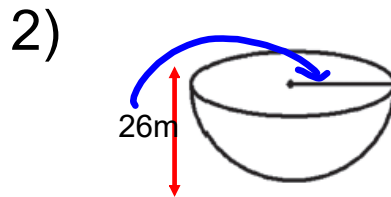
$$D = 30$$

$$r = 15$$

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

$$= \frac{4\pi (15)^3}{3}$$

$$= 14137.17 \text{ dm}^3$$



$$V = \frac{4\pi r^3}{3} \div 2$$

$$= \frac{4\pi (26)^3}{3} \div 2$$

$$= 36811.09 \text{ m}^3$$

3) A 1/4 sphere with a radius of 24cm.

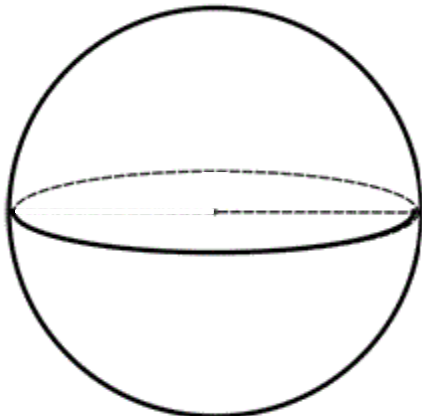
$$V \div 4$$

$$V = \frac{4\pi (24)^3}{3} \div 4$$

$$= 14476.46 \text{ cm}^3$$

Working backwards

1) Find the radius of the sphere.



Volume =  $59 \text{ cm}^3$

$$V = 59 \text{ cm}^3$$

$$59 = \frac{4\pi r^3}{3}$$

$$59 = 4.1888 r^3$$

$$\frac{59}{4.1888} = \frac{4.1888 r^3}{4.1888}$$

$$14.09 = r^3$$

$$\sqrt[3]{14.09} = r$$

$$r = 2.42 \text{ cm}$$