

Volume of Cylinders

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$$V = \pi r^2 \times H$$

$$\pi = 3.14$$

Ex. A cylinder is 15cm tall and has a diameter of 5.2cm.

a) Find the total volume

b) If the cylinder is $\frac{5}{6}$ full of water, what is the volume of empty space?

a) $H = 15\text{cm}$

$$d = 5.2\text{cm}$$

$$V = ?$$

$$r = 5.2 \div 2 = 2.6\text{ cm}$$

$$V = \pi r^2 \times H$$

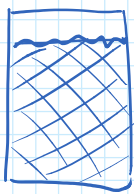
$$V = 3.14 \times 2.6^2 \times 15$$

$$V = 3.14 \times 6.76 \times 15$$

$$V = 318.4\text{ cm}^3$$



b)



$\frac{1}{6}$ empty

$\frac{5}{6}$ full

$$\text{Empty: } 318.4 \div 6 = 53.1\text{ cm}^3$$