

Top Density solid by measure.

V_{cylinder}

$$D = 1.70 \text{ cm}$$

$$H = 3.00 \text{ cm}$$

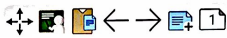
$$r = \frac{D}{2} = \frac{1.70 \text{ cm}}{2}$$

$$0.85 \text{ cm}$$

$$V = \pi \cdot R^2 \cdot H$$

$$V = \pi \cdot (0.85 \text{ cm})^2 \cdot 3.00 \text{ cm} = 6.81 \text{ cm}^3 (\text{mL}) = 9.35 \text{ g/mL}$$

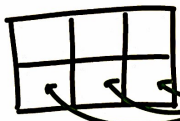
(Density)



D_{cylinder}

$$m = 63.7 \text{ g (gold)}$$

$$D = \frac{m}{V} = \frac{63.7 \text{ g}}{6.81 \text{ mL}}$$



bottom Density through V by diff.

$$V_{\text{start}} = 25.0 \text{ mL}$$

$$V_{\text{final}} = 32.5 \text{ mL}$$

$$V_{\text{cylinder}} = V_{\text{final}} - V_{\text{ini}}$$

$$= 32.5 \text{ mL} - 25.0 \text{ mL}$$

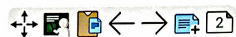
$$= 7.5 \text{ mL}$$

$$V_{\text{cylinder}} = 7.5 \text{ mL}$$

$$m = 63.7 \text{ g (gold)}$$

$$D = \frac{m}{V} = \frac{63.7 \text{ g}}{7.5 \text{ mL}}$$

$$= 8.49 \text{ g/mL}$$



Quiz 2 ReviewDensity Eqns.

$$D = \frac{m}{V} *$$

$$m = D \cdot V **$$

$$V = \frac{m}{D} **$$

$V = l \cdot w \cdot h$ (<u>ml</u>) *	$V, m, \text{ find } D$ **
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