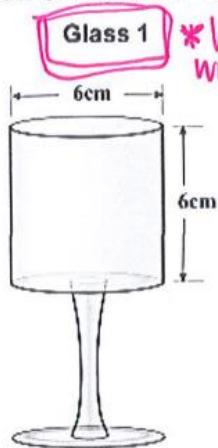


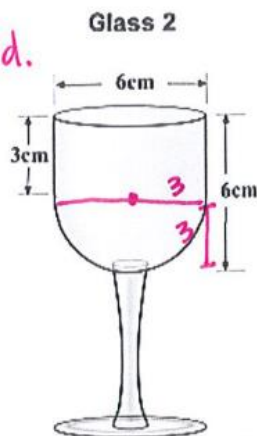
WARM-UP: Find the volume of each glass. Which of the following holds the most liquid?



$$V = \pi 3^2 \cdot 6$$

$$= \boxed{169.6 \text{ cm}^3}$$

* holds the most liquid.



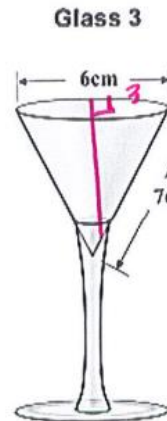
$$V_{\text{cyl}} = \pi 3^2 \cdot 3$$

$$= 84.8 \text{ cm}^3$$

$$V_{\text{hemi}} = \frac{4}{3} \pi 3^3$$

$$= \frac{113.1 \text{ cm}^3}{2} = 56.6$$

$$V_{\text{Total}} = 84.8 + 56.6 = \boxed{141.4 \text{ cm}^3}$$



$$V = \frac{1}{3} \pi 3^2 \cdot 6.3$$

$$= \boxed{59.4 \text{ cm}^3}$$

$$3^2 + b^2 = 7^2$$

$$9 + b^2 = 49$$

$$\sqrt{b^2} = \sqrt{40}$$

$$b \approx 6.3$$