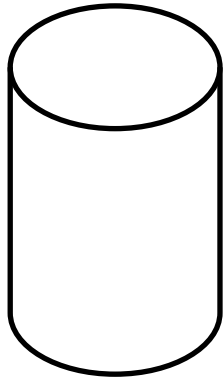


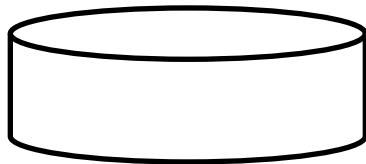
L 10 : Measurement memo (Change subject of the formula)

- 1 A drinking glass in the shape of a cylinder must hold 200ml of liquid when full. Calculate the radius of the glass if its height of the glass is 10cm. Volume = $\pi r^2 h$. Round your answer to 2 decimals



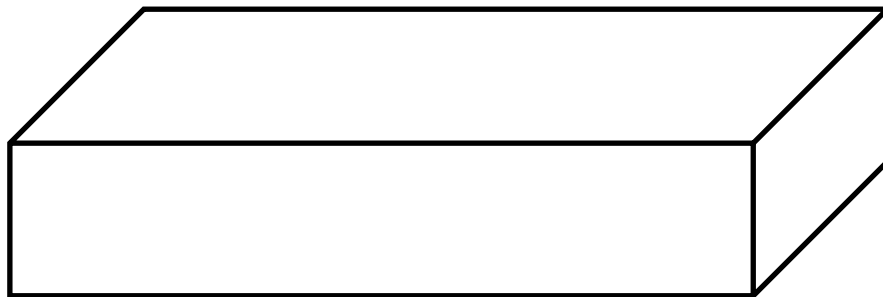
$$\begin{aligned} \text{Volume} &= \pi r^2 h. \\ \text{Volume} &= 200 \text{ ml} \\ \pi r^2 h &= 200 \text{ ml} \\ 3,142 \times r^2 \times 10 &= 200 \text{ cm}^3 \\ 31,42 \times r^2 &= 200 \\ r^2 &= \frac{200}{31,42} \\ r^2 &= 6,3653723 \\ r^2 &= \sqrt{6,3653723} \\ r &\approx 2,5 \text{ cm} \end{aligned}$$

- 2 The circumference of a dam is 21 m. What is the diameter of the dam? Circumference of a circle = $2\pi r$



$$\begin{aligned} 2\pi r &= 21 \\ 2 \times 3,142 \times r &= 21 \\ r &= \frac{21}{6,284} \\ r &\approx 3,342 \text{ m Diameter} = 6,684 \text{ m} \end{aligned}$$

- 3 The perimeter of a rectangular swimming pool is 34m. The length of the pool is 10 m, what is the breadth?



$$\text{Perimeter of a rectangle} = 2l + 2b$$

$$\begin{aligned} 2 \times l + 2 \times b &= 34 \\ 2 \times 10 + 2 \times b &= 34 \\ 20 + 2 \times b &= 34 \\ 2 \times b &= 14 \text{ thus } b = 7 \text{ m} \end{aligned}$$