


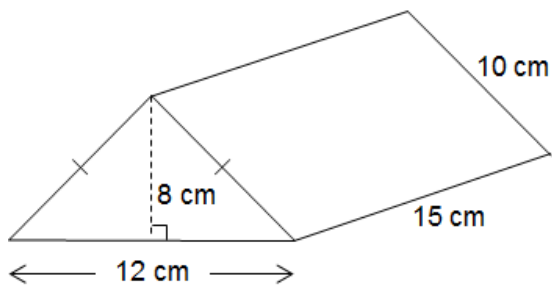
Surface Area and Volume Worksheet

1. Find the volume of a cube with side length 6 cm.



$$\begin{aligned}
 V &= 6 + 6 + 6 + 6 + 6 + 6 \\
 &\quad + 6 + 6 + 6 + 6 + 6 \\
 &= 72 \text{ cm}^3
 \end{aligned}$$

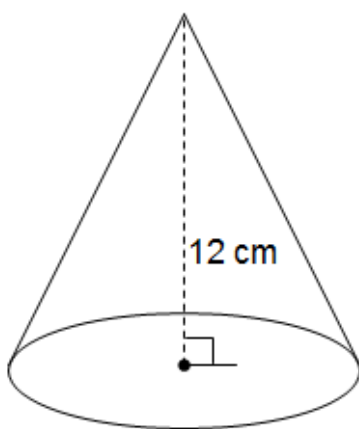
2. Find the surface area of this triangular prism.



$$\begin{aligned}
 SA &= \\
 &15 + 15 + 10 + 10 + 10 + 10 + 12 + \\
 &12 + 8 \\
 &= 102 \text{ cm}^3
 \end{aligned}$$

Demonstrated a limited understanding of calculating the surface area of a triangular prism. Recognised the correct units for volume

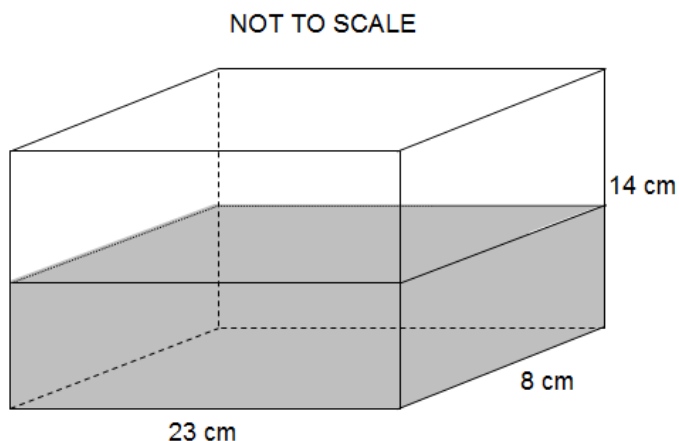
3. Find the volume of this cone to the nearest cm^3 .



Diameter = 7 cm

$$\begin{aligned}
 V &= \frac{1}{2} \pi r^2 h \\
 V &= \frac{1}{2} \times 12 \times 3.5 \\
 &= 21 \text{ cm}^3
 \end{aligned}$$

4.



1000 mL of water is poured into the container shown in the diagram above.

(a) What is the volume of the container?

$$\begin{array}{l}
 14 + 14 + 14 + 14 + 14 + 14 + 14 + 14 \\
 23 + 23 + 23 + 23 + 8 + 8 + 8 + 8 \\
 V = 236 \text{ cm}^3
 \end{array}$$

(b) What volume of water is required to fill the container?

$$\begin{array}{l}
 236 \div 2 \\
 \cancel{V_{OF} = 118 \text{ cm}^3} \\
 V_{OF} = 118 \text{ mL}
 \end{array}$$

Indicated a limited understanding of calculating the volume of a rectangular prism

Grade Commentary

Riley has demonstrated limited knowledge and understanding of surface area and volume and shown limited competence in some of the processes and skills. This work sample demonstrated characteristics of work typically produced by a student performing at a grade E2 level.