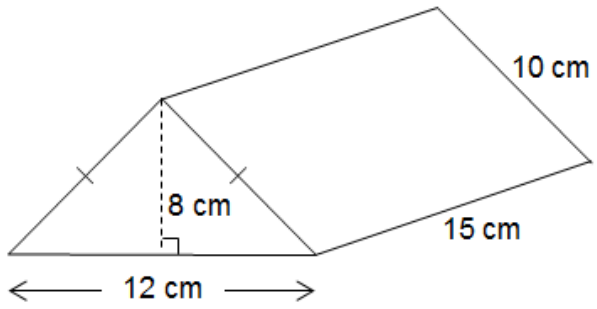
Surface Area and Volume Worksheet

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

$V = Ah$
$V = 36 \times 6$
$= 216 cm^3$

Indicated a clear understanding of the formula for the volume of a cube and provided the correct units

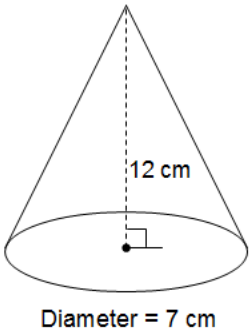
2. Find the surface area of this triangular prism.



Front ~~side~~ : $\frac{1}{2}$ bh
$= \frac{1}{2} \times 12 \times 8$
$= 48$
back = 48
bottom = 180
left side = 150
right side = 150
total surface area = 48+48+180+150+150
$= 576 cm^2$.

Demonstrated a sound understanding of the process to calculate the surface area of a triangular prism and provided the correct units

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



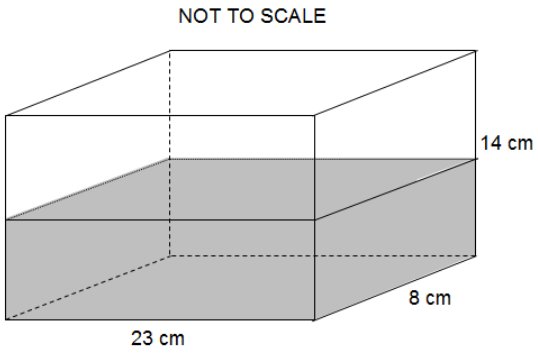
$V = \frac{1}{3}\pi r^2 h$

$= \frac{1}{3} \times \pi \times 3.5^2 \times 12$

$= 154\ cm^3$

Correctly calculated the volume of the cone to the nearest cm^3

4.



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

(a) What is the volume of the container?

$V = Ah$

$= 23 \times 8 \times 14$

$= 2576\ cm^3$

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

2576mL

2.576 L

Indicated a sound understanding of the volume of a prism and provided the correct units. Recognised the relationship between volume and capacity, but provided no evidence of the process to obtain the capacity

Grade Commentary

Taylor has demonstrated a sound knowledge and understanding of surface area and volume. The appropriate formulae have been selected and applied accurately, indicating a clear understanding of the concepts. This work sample demonstrated characteristics of work typically produced by a student performing at a grade C6 level.