

Name:

Exam Style Questions

Volume: L-Shaped Prism



Equipment needed: Calculator, pen

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

www.corbettmaths.com/contents

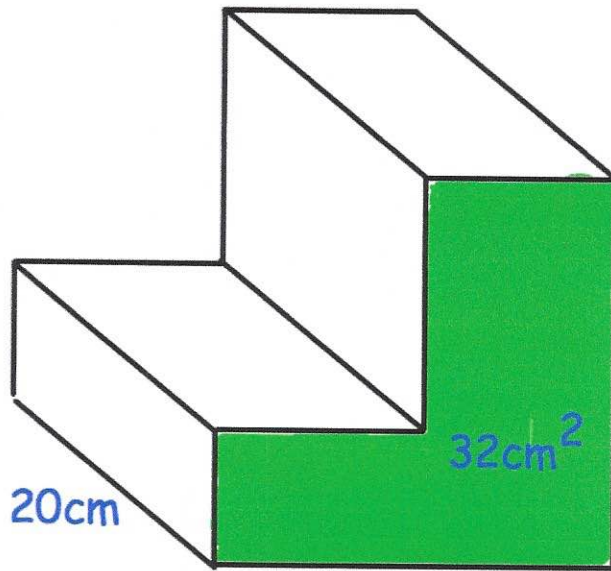
Video 358



Answers and Video Solutions



1. The diagram shows a prism.



The cross-sectional area is 32cm^2 .

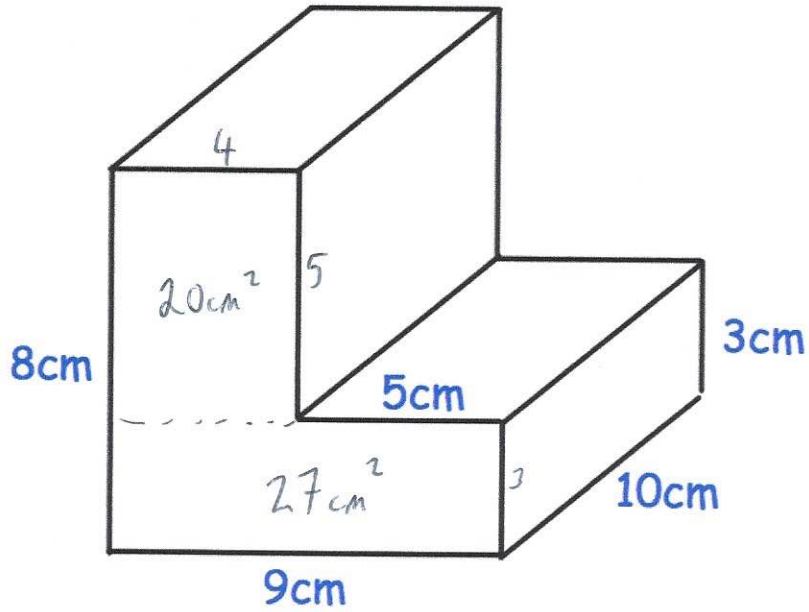
Work out the volume of the prism.

$$32 \times 20 = 640 \text{ cm}^3$$

$$\begin{array}{r} 640 \\ \text{.....} \end{array} \text{cm}^3$$

(2)

2. The diagram shows a prism.



Work out the volume of the prism.

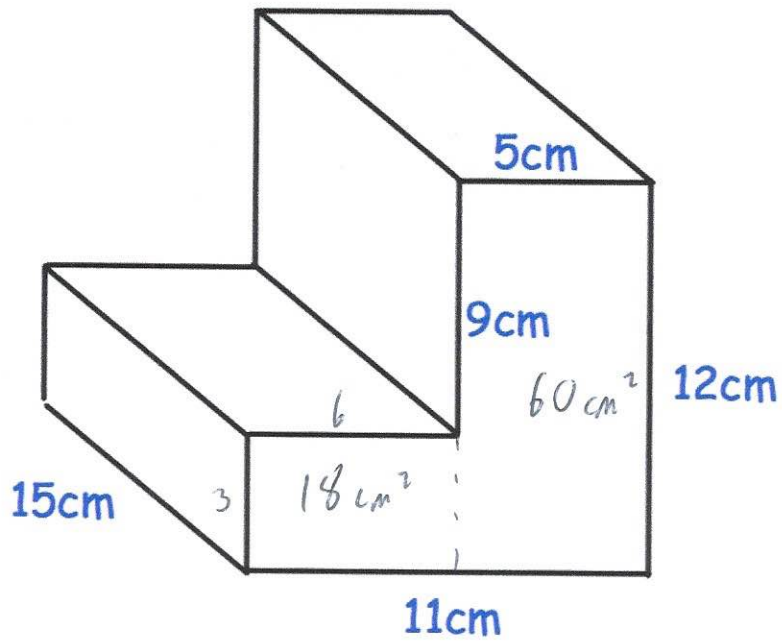
$$\begin{array}{r} 5 \times 4 = 20 \\ 9 \times 3 = 27 \\ \hline 47 \end{array}$$

$$47 \times 10 = 470 \text{ cm}^3$$

$$\begin{array}{r} 470 \\ \hline \end{array} \text{ cm}^3$$

(4)

3. The diagram shows a prism.



Work out the volume of the prism.

$$5 \times 12 = 60 \text{ cm}^2$$

$$3 \times 6 = 18 \text{ cm}^2$$

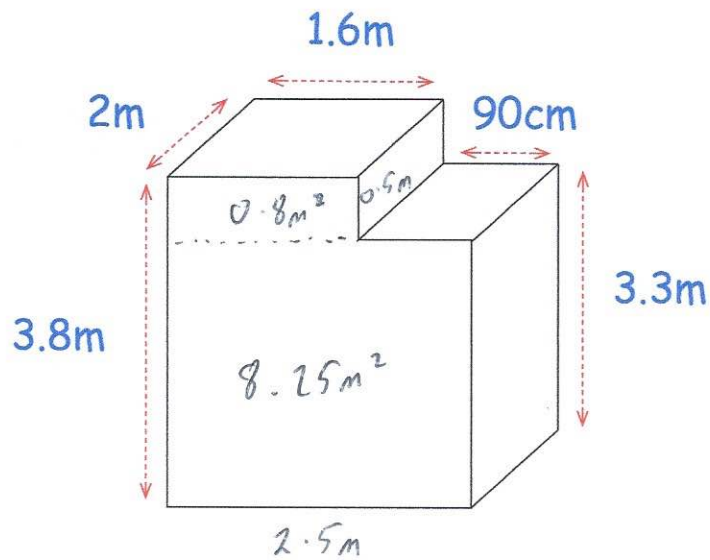
$$\begin{array}{r} 60 \\ + 18 \\ \hline 78 \end{array} \text{ cm}^2$$

$$78 \times 15 = 1170 \text{ cm}^3$$

$$\dots\dots\dots 1170 \text{ cm}^3$$

(4)

4. Shown below is a prism.



Work out the volume of the prism.
State the units of your answer.

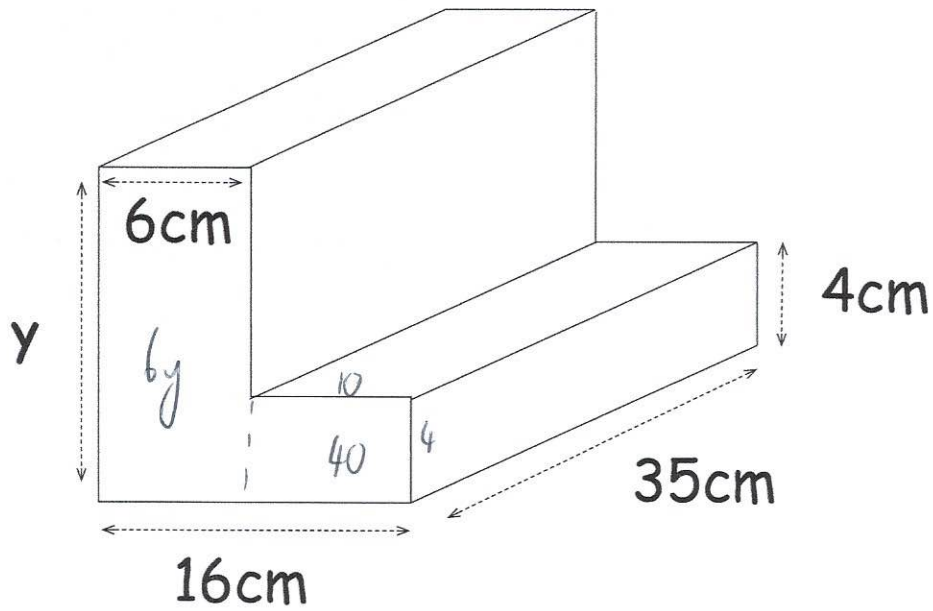
$$\begin{aligned} 0.5 \times 1.6 &= 0.8 \text{ m}^2 \\ 3.3 \times 2.5 &= 8.25 \text{ m}^2 \\ \hline &9.05 \text{ m}^2 \end{aligned}$$

$$9.05 \times 2 = 18.1 \text{ m}^3$$

$$\underline{\hspace{1cm}} 18.1 \text{ m}^3$$

(4)

5. Shown below is a prism.



The volume of the prism is 3815cm^3

Work out the height of the prism, y .

$$3815 \div 35 = 109\text{cm}^2$$

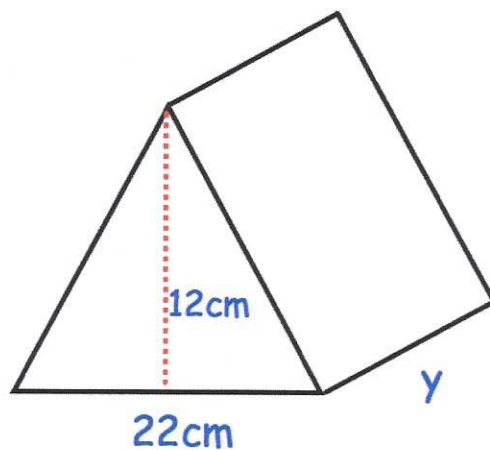
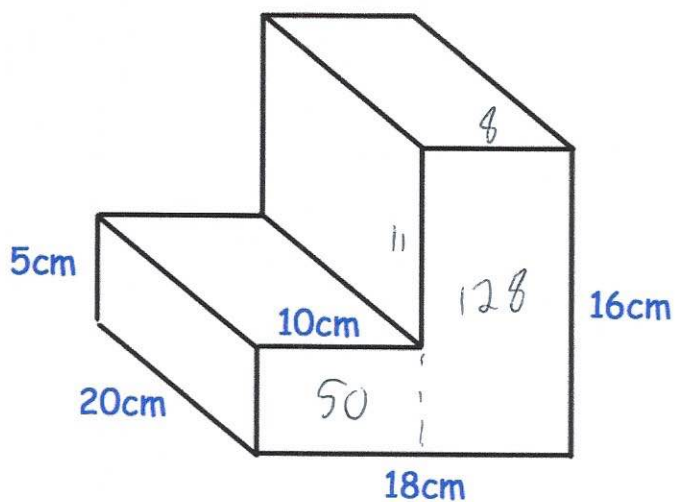
$$6y + 40 = 109$$

$$6y = 69$$

$$y = 11.5$$

..... 11.5cm
(4)

6. Shown below is an L-shaped prism and a triangular prism.



Both prisms have the same volume.

Calculate y .

$$5 \times 10 = 50$$

$$8 \times 16 = 128$$

$$\underline{178}$$

$$178 \times 20 = 3560 \text{ cm}^3$$

$$\frac{1}{2} (22) \times 12 = 132 \text{ cm}^2$$

$$132 \times y = 3560$$

$$y = 26.9696\dots$$

$$\underline{\dots\dots\dots} 26.97 \text{ cm}$$

(5)