

Name

# Key to Five

Unit 2: Area and Pythagoras

## The PiXL Ladder to Success



- Surface area
- Compound areas
- Area of parallelograms
- Area of trapezium

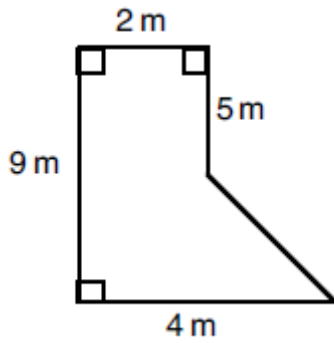
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**Section A**

**Question 1.**

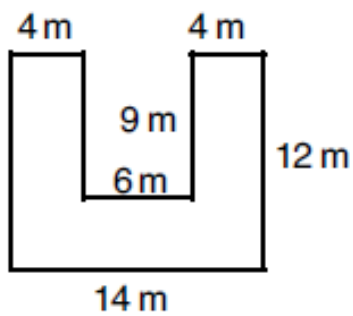
Find the area of the following composite shapes:

(a)



.....  
(2)

(b)



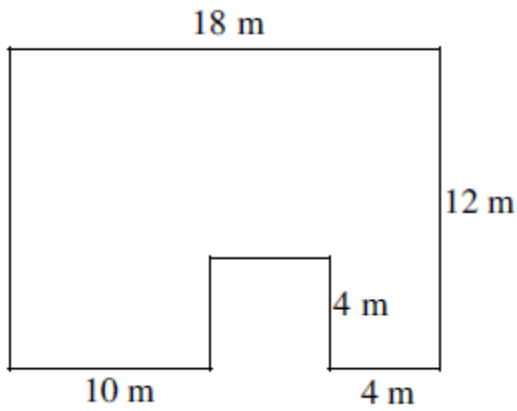
.....  
(2)

**(Total 4 marks)**

**Question 2**

Find the area of the following composite shapes:

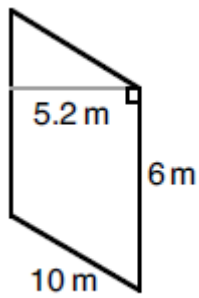
(a)


 .....m<sup>2</sup> (3)

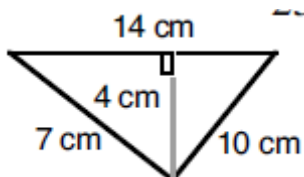
**Question 3.**

Find the areas of the following 2D shapes.

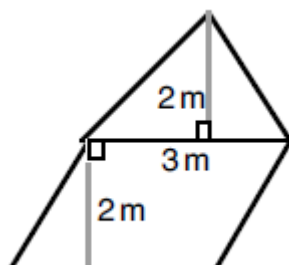
(a)


 .....m<sup>2</sup> (2)

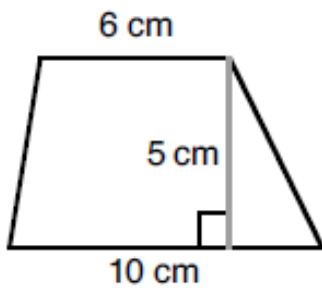
(b)


 .....cm<sup>2</sup> (2)

(c)

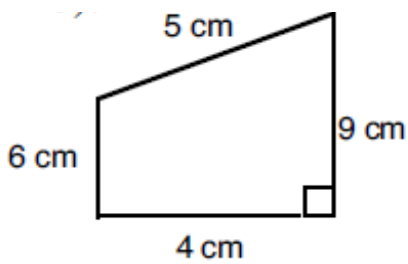

 .....m<sup>2</sup> (2)

(d)



.....  $\text{cm}^2$   
 (2)

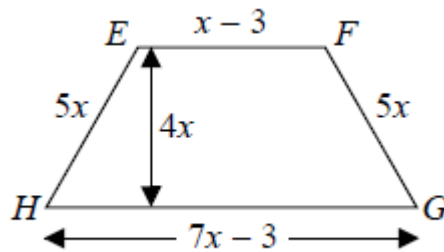
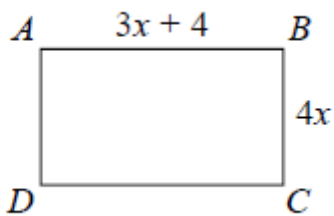
(e)



.....  $\text{cm}^2$   
 (2)

**Question 4.**

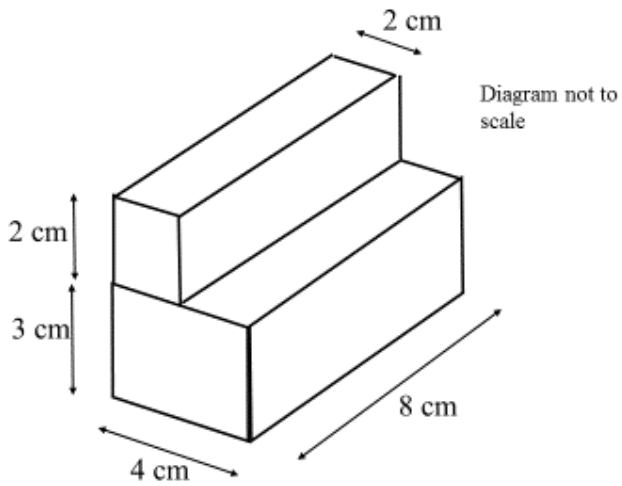
The perimeters of the rectangle and the trapezium are equal. Find the area of the Trapezium.



.....  $\text{cm}^2$   
 (6)

**Section B**
**Question 5.**

Calculate the surface area of the following shape

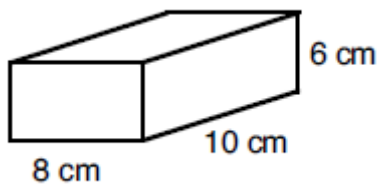


(4 marks)

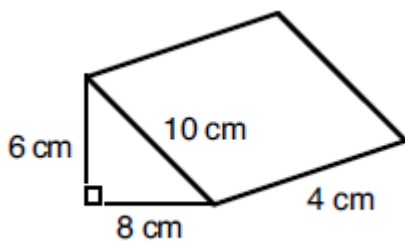
**Question 6.**

Find the volumes of the following prisms:

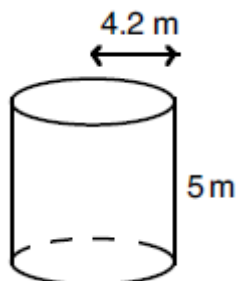
(a)


 .....cm<sup>3</sup>  
 (2)

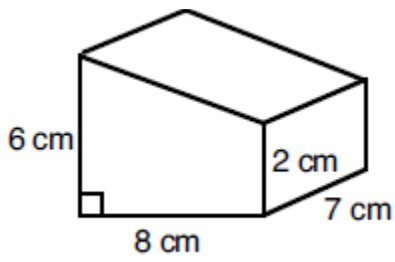
(b)


 .....cm<sup>3</sup> (2)

(c)


 .....m<sup>3</sup> (3)

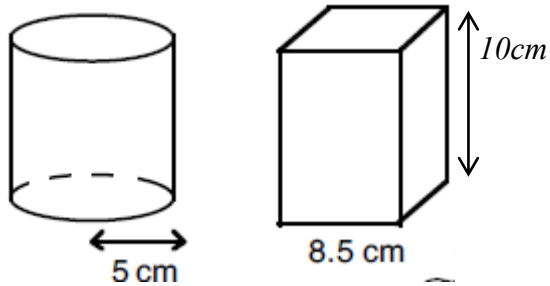
(d)



.....cm<sup>3</sup> (3)

**Question 7.**

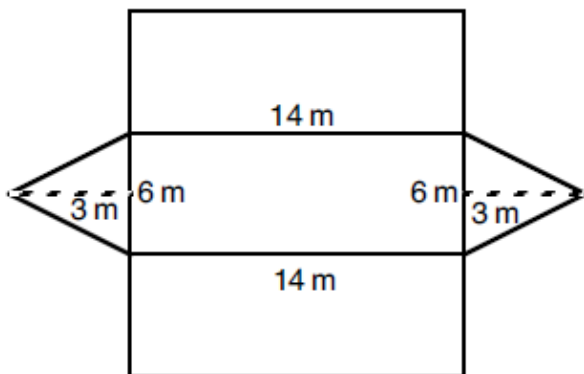
Here are 2 different shaped tins that manufacturers are using for cat food.  
 The square based tin has a height of 10cm and both tins have the same volume.  
 What is the height of the cylindrical tin to 1 decimal place?



.....cm  
(4)

**Question 8.**

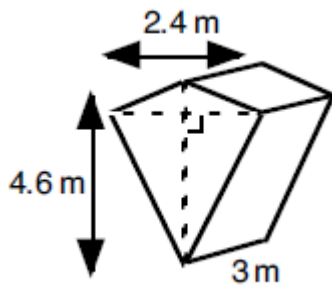
The net shown folds to form a triangular prism. What is its volume?



.....m<sup>3</sup>  
(3)

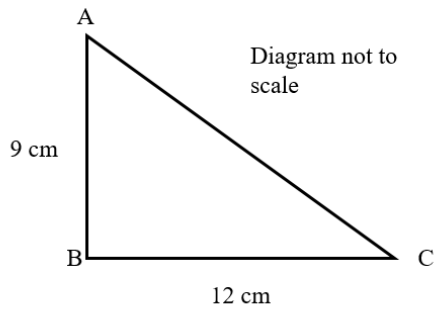
**Question 9.**

Calculate the volume of the prism in the diagram.



..... $m^3$   
**(3)**

**Section C**  
**Question 10**



ABC is a right-angled triangle.  
 $AB = 9 \text{ cm}$ ,  $BC = 12 \text{ cm}$   
 Calculate the length of AC.

.....

**(Total 3 marks)**

**Question 11.**

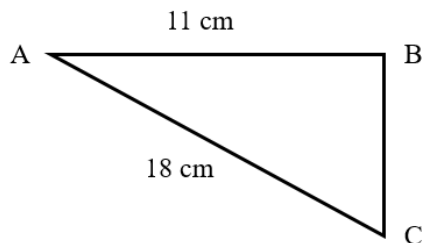


Diagram not to scale

ABC is a right-angled triangle.  
 $AB = 11 \text{ cm}$ ,  $AC = 18 \text{ cm}$   
 Calculate the length of BC.  
 Give your answer correct to 1 decimal place.

.....

**(Total 3 marks)**



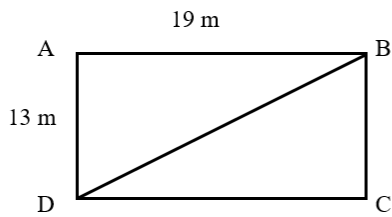
**Question 12.**


Diagram not to scale

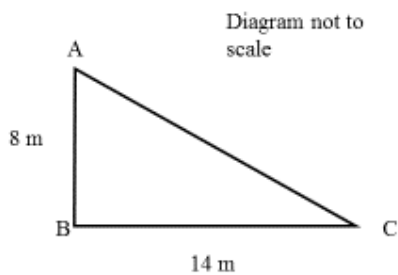
ABCD is a rectangle.

$AB = 19\text{ m}$ ,  $AD = 13\text{ m}$

Work out the length of the diagonal BD.

Give your answer correct to 3 significant figures.

.....  
**(Total 4 marks)**

**Question 13.**


ABC is a right angled triangle.

$AB = 8\text{ m}$ ,  $BC = 14\text{ m}$

Calculate the length of AC.

Give your answer correct to 1 decimal place.

.....  
**(Total 3 marks)**

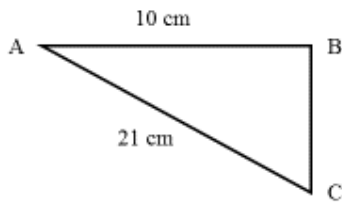
**Question 14**


Diagram not to scale

ABC is a right angled triangle.

AB = 10 cm, AC = 21 cm

Calculate the length of BC.

Give your answer correct to 1 decimal place.

.....

**(Total 3 marks)**

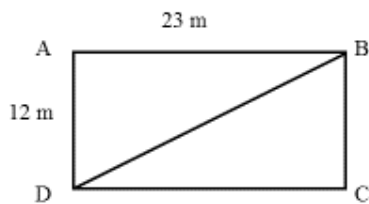
**Question 15.**


Diagram not to scale

ABCD is a rectangle.

AB = 23 m, AD = 12 m

Work out the length of the diagonal BD.

Give your answer correct to 3 significant figures.

.....

**(Total 4 marks)**

