

1.

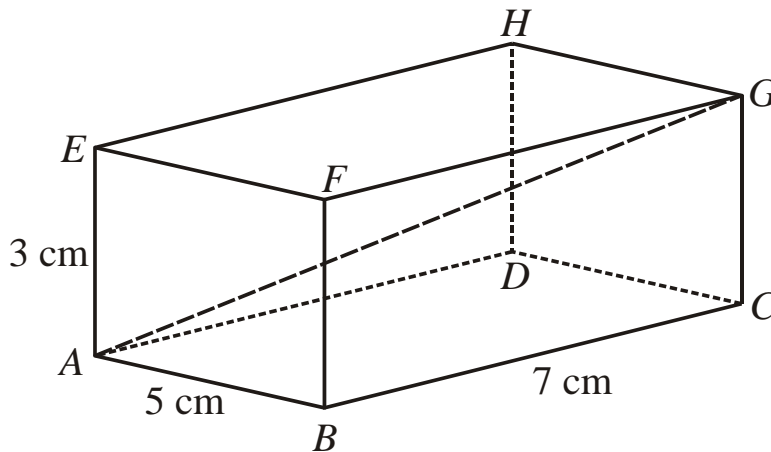


Diagram **NOT** accurately drawn

The diagram represents a cuboid  $ABCDEFGH$ .

$$AB = 5 \text{ cm.}$$

$$BC = 7 \text{ cm.}$$

$$AE = 3 \text{ cm.}$$

Calculate the length of  $AG$ .

Give your answer correct to 3 significant figures.

..... cm

(3)

2. A cuboid has length 3 cm, width 4 cm and height 12 cm.

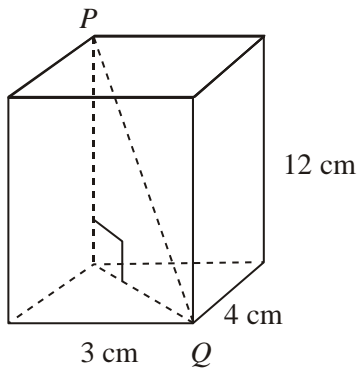


Diagram **NOT**  
accurately drawn

Work out the length of  $PQ$ .

..... cm  
(Total 3 marks)

3. The diagram shows a pyramid. The apex of the pyramid is  $V$ .  
 Each of the sloping edges is of length 6 cm.

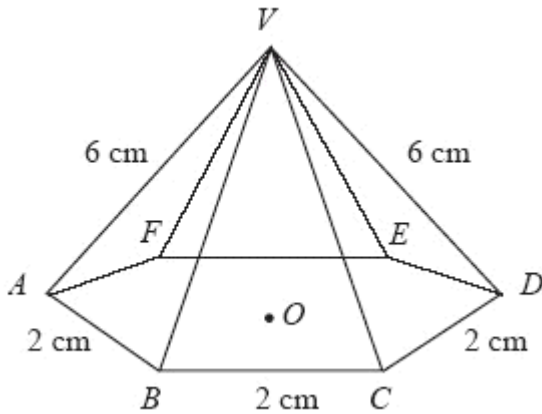


Diagram NOT accurately drawn

The base of the pyramid is a regular hexagon with sides of length 2 cm.  
 $O$  is the centre of the base.

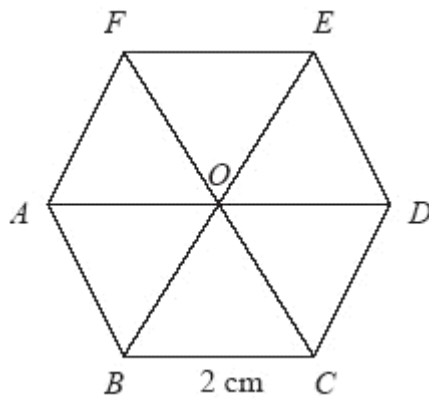


Diagram NOT accurately drawn

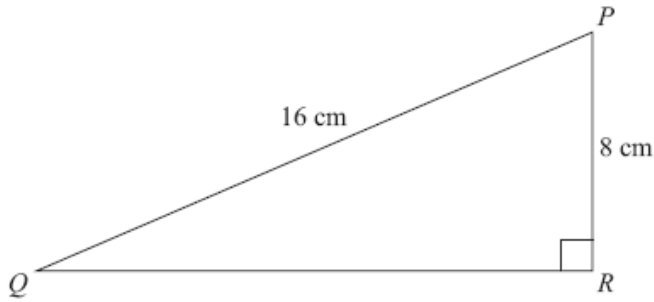
Calculate the height of  $V$  above the base of the pyramid.  
 Give your answer correct to 3 significant figures.

.....cm

(3)

1.

Diagram **NOT**  
accurately drawn



$PQR$  is a right-angled triangle.  
 $PQ = 16$  cm.  
 $PR = 8$  cm.

Calculate the length of  $QR$ .  
Give your answer correct to 2 decimal places.

..... cm

**(3 marks)**

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2.

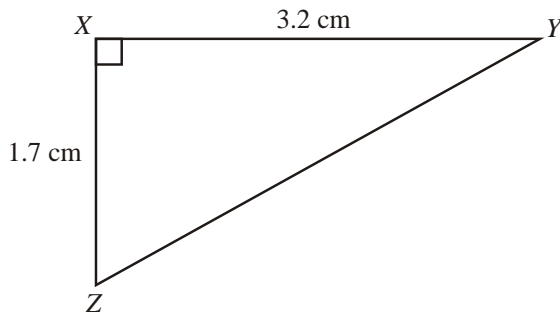


Diagram **NOT**  
accurately drawn

$XYZ$  is a right-angled triangle.  
 $XY = 3.2$  cm.  
 $XZ = 1.7$  cm.

Calculate the length of  $YZ$ .  
Give your answer correct to 3 significant figures.

..... cm

**(3 marks)**

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3.

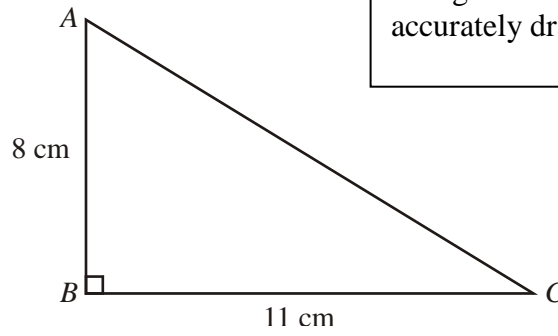


Diagram **NOT** accurately drawn

$ABC$  is a right-angled triangle.

$AB = 8$  cm,  
 $BC = 11$  cm.

Calculate the length of  $AC$ .  
 Give your answer correct to 3 significant figures.

..... cm

**(3 marks)**

4.

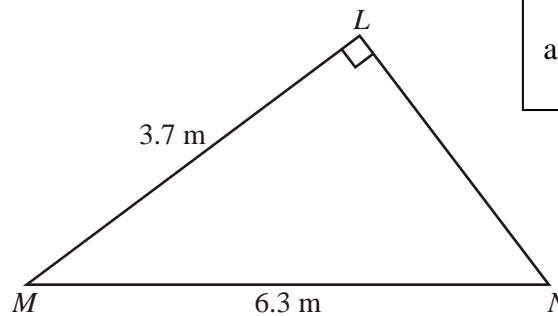


Diagram **NOT** accurately drawn

Angle  $MLN = 90^\circ$ .  
 $LM = 3.7$  m.  
 $MN = 6.3$  m.

Work out the length of  $LN$ .  
 Give your answer correct to 3 significant figures.

$LN =$  ..... m

**(3 marks)**

5.

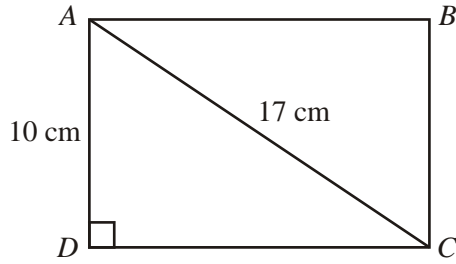


Diagram **NOT** accurately drawn

$ABCD$  is a rectangle.  
 $AC = 17$  cm.  
 $AD = 10$  cm.

Calculate the length of the side  $CD$ .  
 Give your answer correct to one decimal place.

..... cm

**(3 marks)**

6.

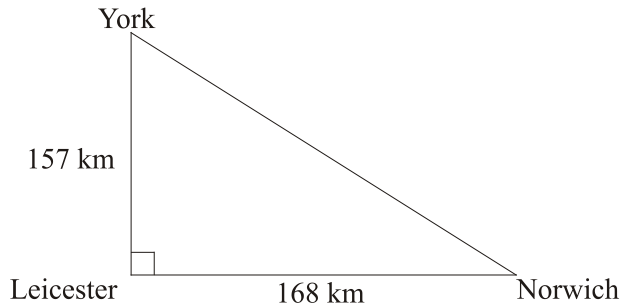


Diagram **NOT** accurately drawn

The diagram shows three cities.  
 Norwich is 168 km due East of Leicester.  
 York is 157 km due North of Leicester.

Calculate the distance between Norwich and York.  
 Give your answer correct to the nearest kilometre.

..... km

**(3 marks)**

7.

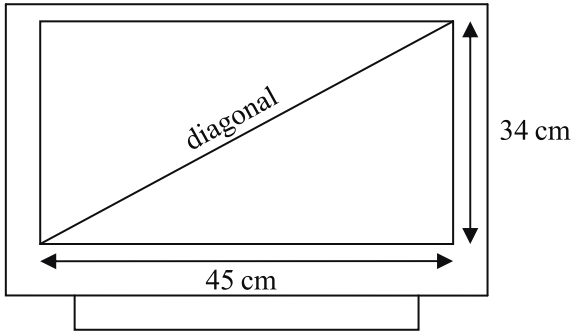


Diagram **NOT**  
accurately drawn

A rectangular television screen has a width of 45 cm and a height of 34 cm.

Work out the length of the diagonal of the screen.  
Give your answer correct to the nearest centimetre.

..... cm

**(4 marks)**

8.

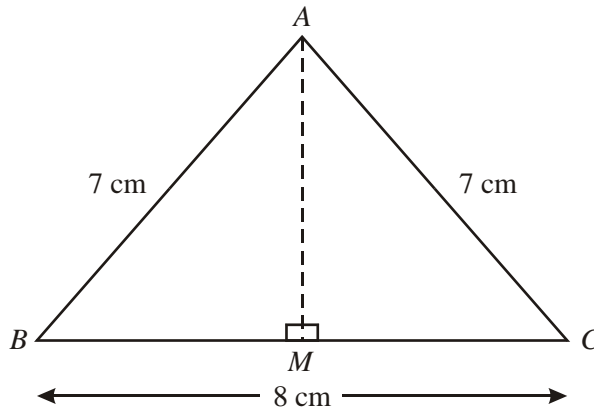


Diagram **NOT** accurately drawn

Work out the length, in centimetres, of  $AM$ .  
Give your answer correct to 2 decimal places.

..... cm

**(3 marks)**

9.

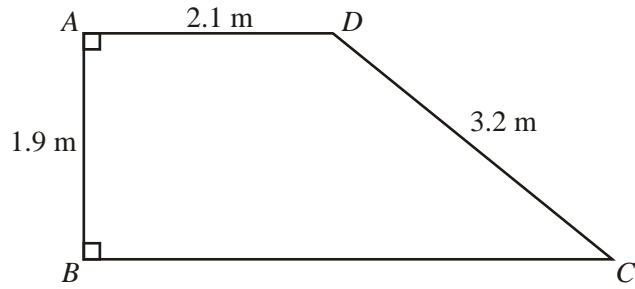


Diagram **NOT** accurately drawn

$ABCD$  is a trapezium.  
 $AD$  is parallel to  $BC$ .  
 Angle  $A =$  angle  $B = 90$ .  
 $AD = 2.1$  m,  $AB = 1.9$  m,  $CD = 3.2$  m.

Work out the length of  $BC$ .  
 Give your answer correct to 3 significant figures.

..... m

**(4 marks)**

10.

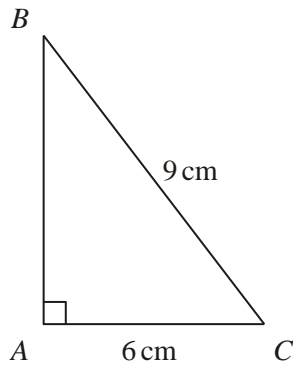


Diagram **NOT** accurately drawn

$ABC$  is a right-angled triangle.

$AC = 6$  cm.  
 $BC = 9$  cm.

Work out the length of  $AB$ .  
 Give your answer correct to 3 significant figures.

..... cm

**(3 marks)**



11.

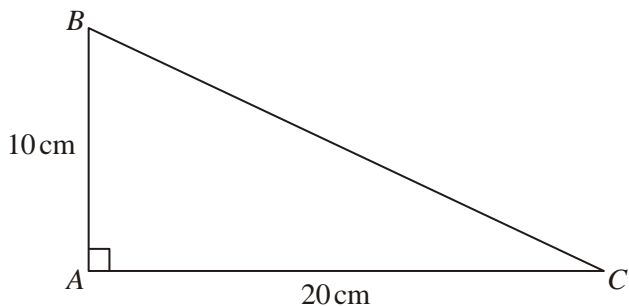


Diagram **NOT** accurately drawn

In triangle *ABC*,

$$AB = 10 \text{ cm}$$

$$AC = 20 \text{ cm}$$

$$\text{angle } BAC = 90^\circ$$

Work out the length of *BC*.

Give your answer correct to 3 significant figures.

You must state the units in your answer.

.....

**(4 marks)**

12.

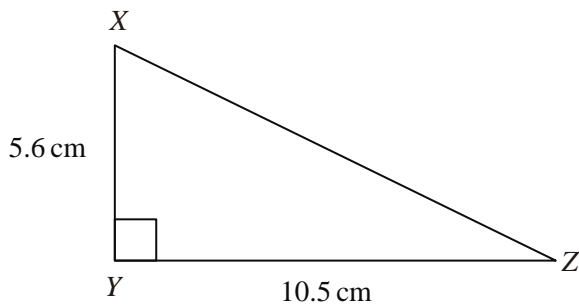


Diagram **NOT** accurately drawn

In the triangle *XYZ*

$$XY = 5.6 \text{ cm}$$

$$YZ = 10.5 \text{ cm}$$

$$\text{angle } XYZ = 90$$

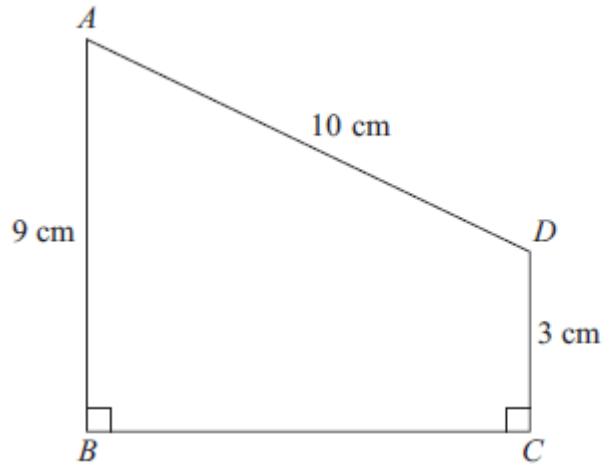
Work out the length of *XZ*.

..... cm

**(3 marks)**

13.  $ABCD$  is a trapezium.

Diagram **NOT** accurately drawn



- $AD = 10$  cm
- $AB = 9$  cm
- $DC = 3$  cm
- Angle  $ABC =$  angle  $BCD = 90^\circ$

Calculate the length of  $AC$ .  
 Give your answer correct to 3 significant figures.

..... cm

**( 5 marks)**

14. A ladder is 6 m long.  
 The ladder is placed on horizontal ground, resting against a vertical wall.

The instructions for using the ladder say that the bottom of the ladder must **not** be closer than 1.5 m from the bottom of the wall.

How far up the wall can the ladder reach?  
 Give your answer correct to 1 decimal place.

..... m

**( 4 marks)**