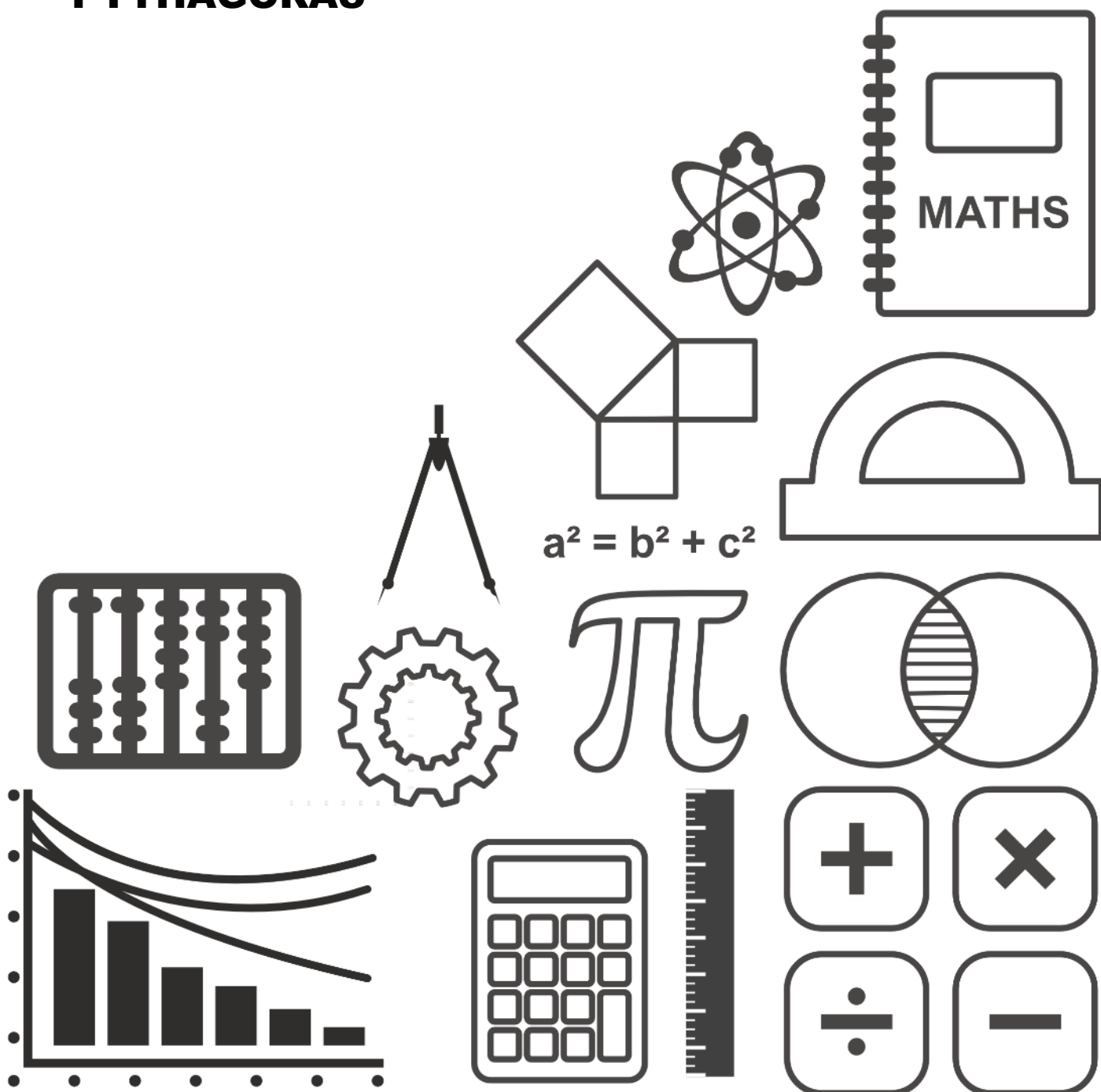
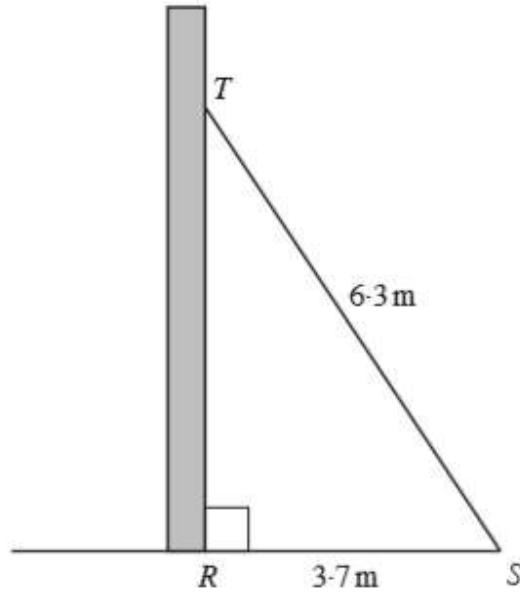


# MATHSDIY

## GCSE TOPIC BOOKLET PYTHAGORAS



1. A ladder,  $ST$ , of length  $6.3$  m rests against a vertical wall. The foot of the ladder  $S$  is on horizontal ground,  $3.7$  m from the base of the wall. Calculate the height,  $TR$ , of the top of the ladder above the ground, giving your answer to an appropriate degree of accuracy.



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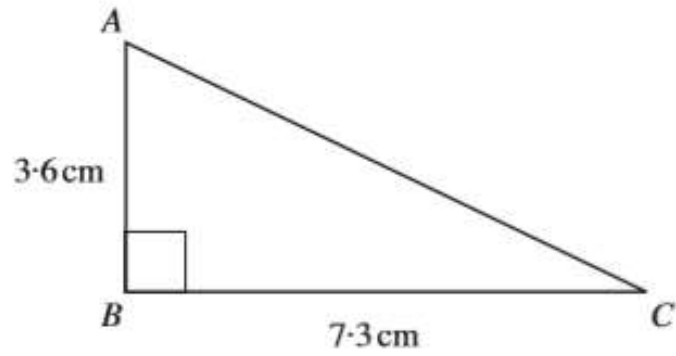
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[3]

2.



*Diagram not drawn to scale.*

Find the length of  $AC$ .

Give your answer to an appropriate degree of accuracy.

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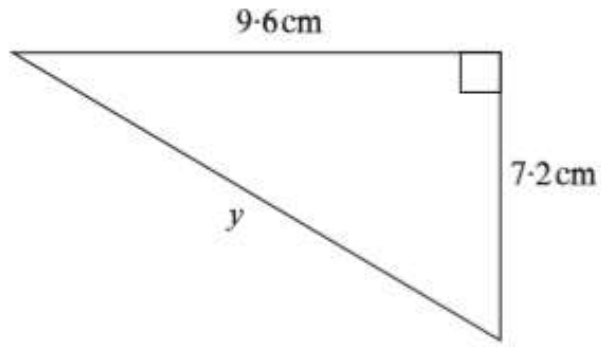
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[4]

3.



*Diagram not drawn to scale*

Calculate the length of the side marked  $y$ .

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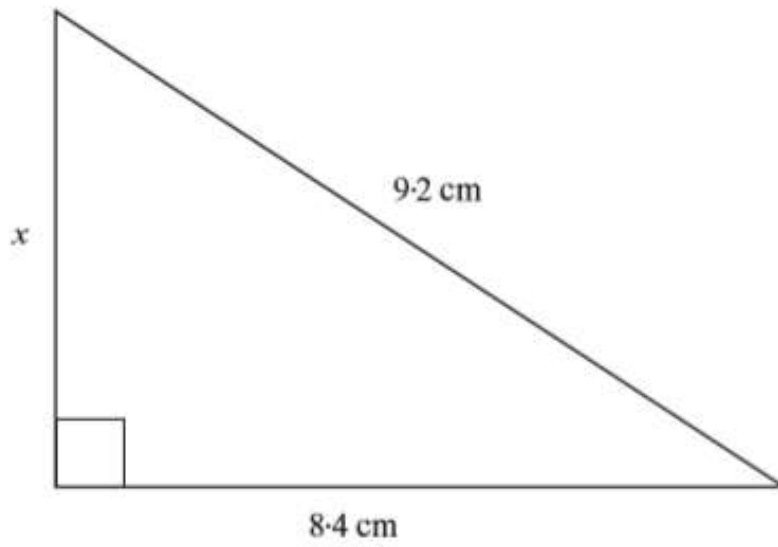
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[3]

4.



*Diagram not drawn to scale*

Calculate the length of the side marked  $x$ .

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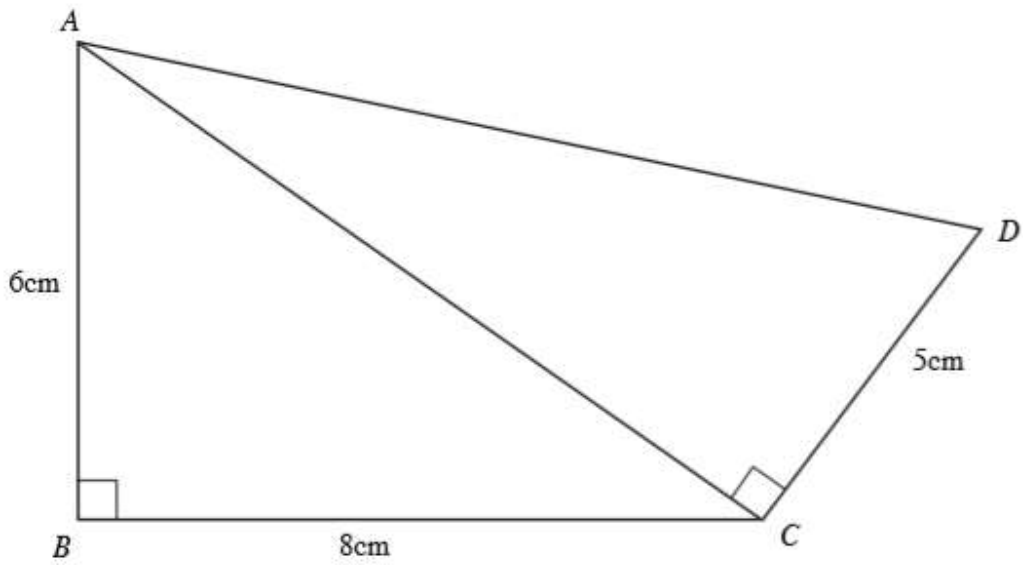
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[3]

5. In the diagram below, triangle  $ABC$  has a right-angle at  $B$  and triangle  $ACD$  has a right-angle at  $C$ .  
 $AB = 6\text{cm}$ ,  $BC = 8\text{cm}$  and  $CD = 5\text{cm}$ .  
 Calculate the length of  $AD$ .




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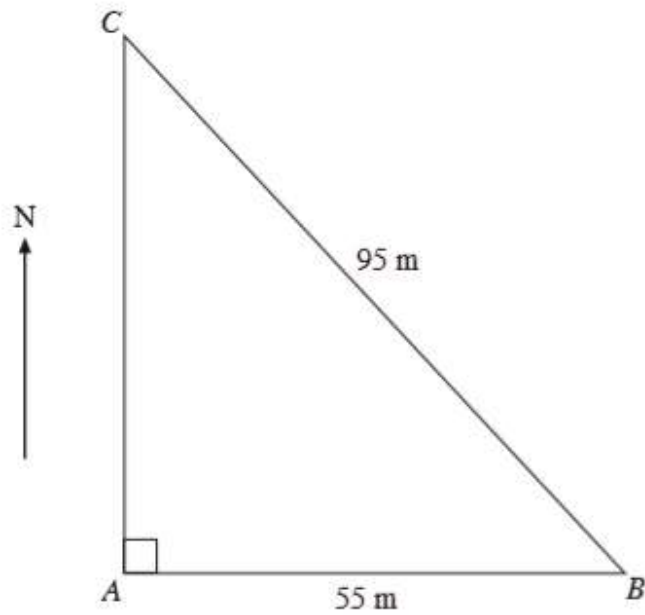
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[6]

6. The diagram shows three points  $A$ ,  $B$  and  $C$ , which are on level ground.  
 The point  $B$  is 55m due East of  $A$ .  
 The point  $C$  is due North of  $A$  and 95m from  $B$ .



*Diagram not drawn to scale.*

Calculate the distance  $AC$ , giving your answer to an appropriate degree of accuracy.

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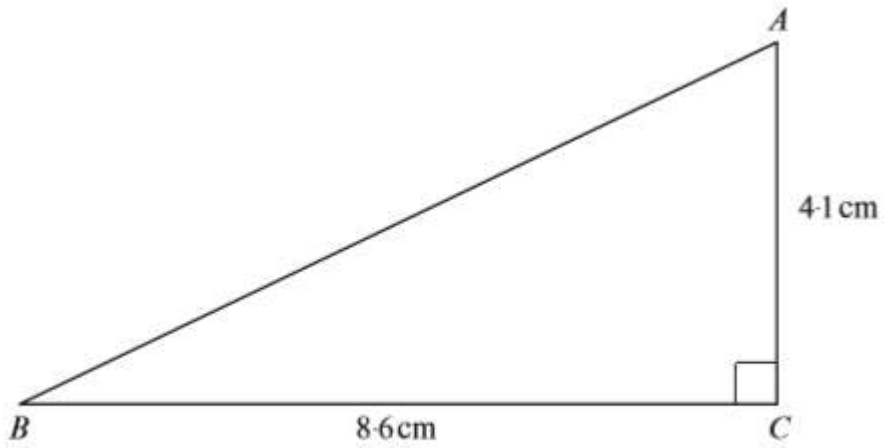
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[4]

7.



*Diagram not drawn to scale*

Calculate the perimeter of the triangle  $ABC$ , giving your answer correct to 2 significant figures.

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[5]



8.

- (a) The length and width of rectangular television screens are often in the ratio 4 : 3. Calculate the length of the shorter side of such a television screen when the longer side is 36 inches long. [2]

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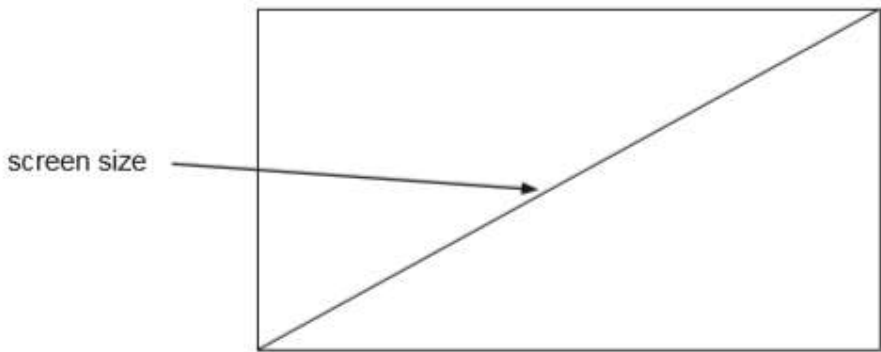
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- (b) The 'size' of a television screen, given in inches, is the length of the diagonal, as shown in the diagram below.



*Diagram not drawn to scale*

Calculate the screen size of the television described in part (a). [3]

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9.

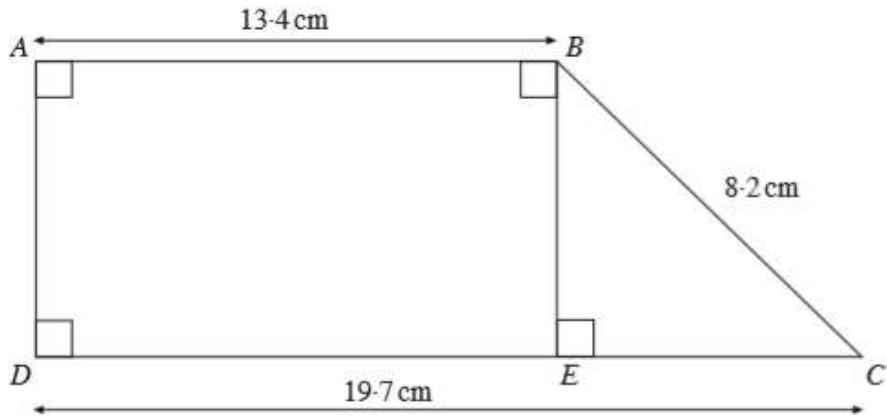


Diagram not drawn to scale.

Calculate the area of the trapezium  $ABCD$ .

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[7]