

Intermediate Tier Numeracy Right Angled Triangle Questions – Pythagoras' Theorem

The wire window guard shown below is to be made.

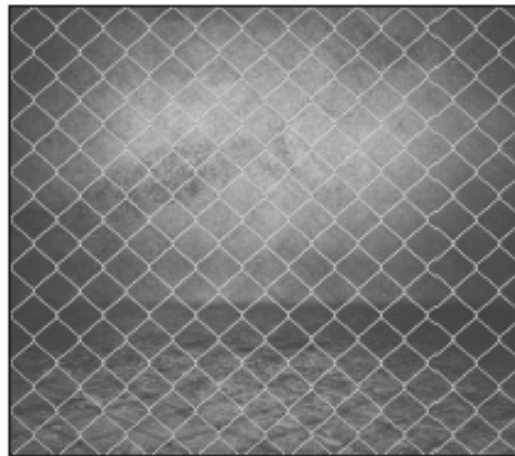


Diagram not drawn to scale

The length of the sides of each small wire square shown is 3.3 cm.

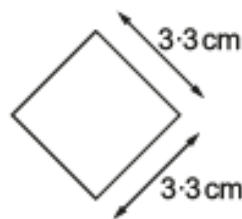


Diagram not drawn to scale

Linos considers the length of the diagonal of each small square.

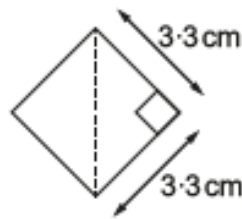


Diagram not drawn to scale

She says,

The height of the window guard is equal to 9.5 diagonals of the square.
The width of the window guard is equal to 11 diagonals of the square.

Marta buys a new television.

- (a) Marta wants to fit the television in a bookcase on the wall. In the shop she forgot to write down the length of the television. She did write down the height and the diagonal of the screen.

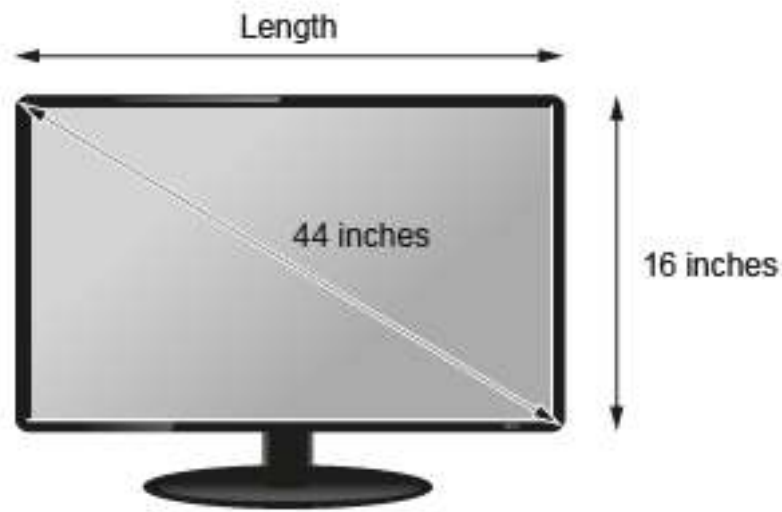


Diagram not drawn to scale

Marta needs to know the length of the screen before she opens the box, in case she wants to return the television.

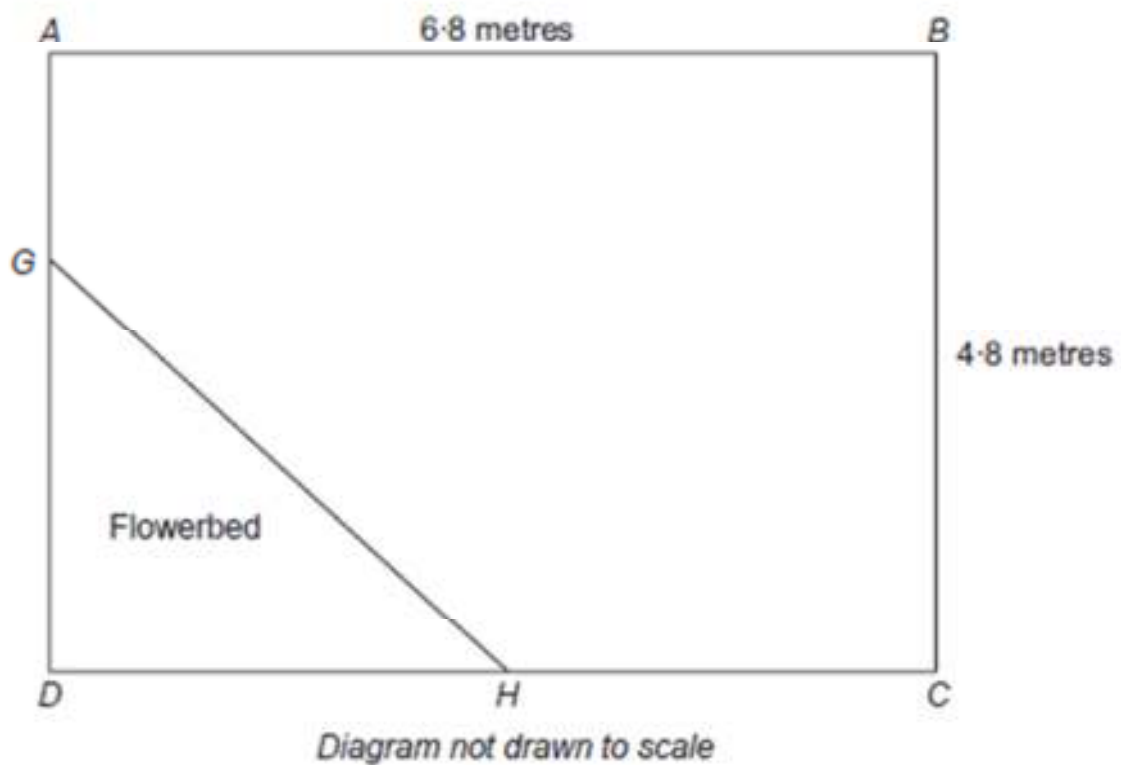
Calculate the length of the screen.

Give your answer correct to 2 significant figures.

[4]

Bethan has a plan of her rectangular lawn, which she has labelled $ABCD$. She wants to cut out a triangular flowerbed from her lawn, labelled GHD . Bethan decides that $AG : GD$ should be $1 : 2$ and that $DH = HC$.

She has made a sketch shown below.



(a) Calculate the length of GH .

[4]

Pack4 is a company that makes cardboard boxes.

(a) One of their boxes, in the shape of a triangular prism, is shown below.

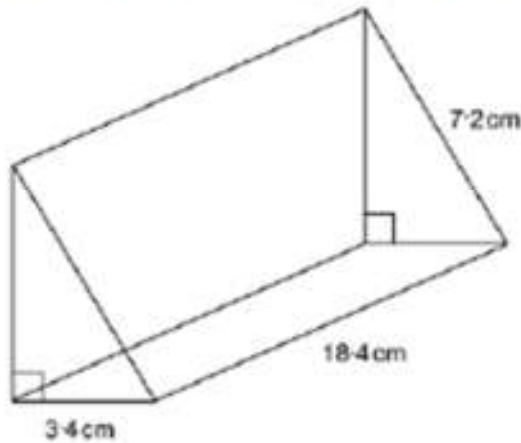


Diagram not drawn to scale

A customer wants a box with a volume of 0.2 litres.

State by how much the volume is greater or less than 0.2 litres, giving your answer in cm^3 correct to 2 significant figures. [6]

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(b) Explain why this may not be a suitable box for the customer. [1]

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