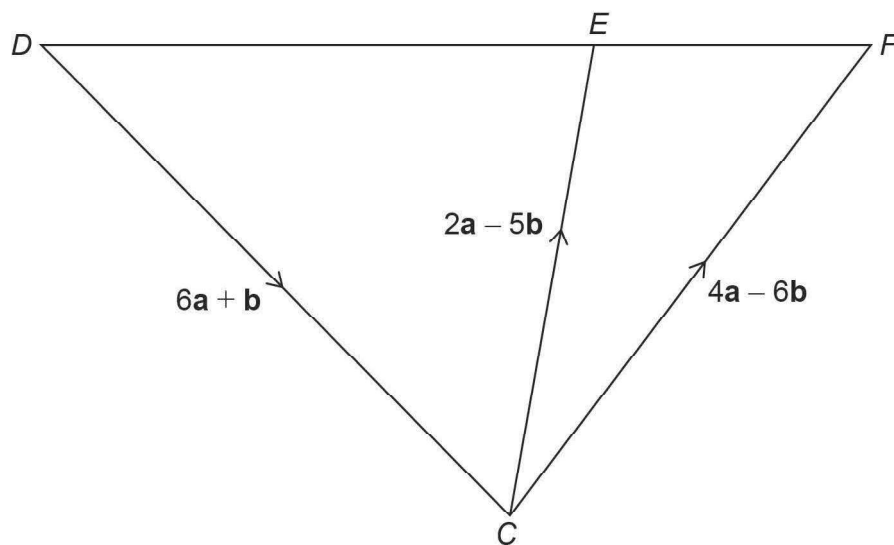


Not drawn accurately



[4 marks]

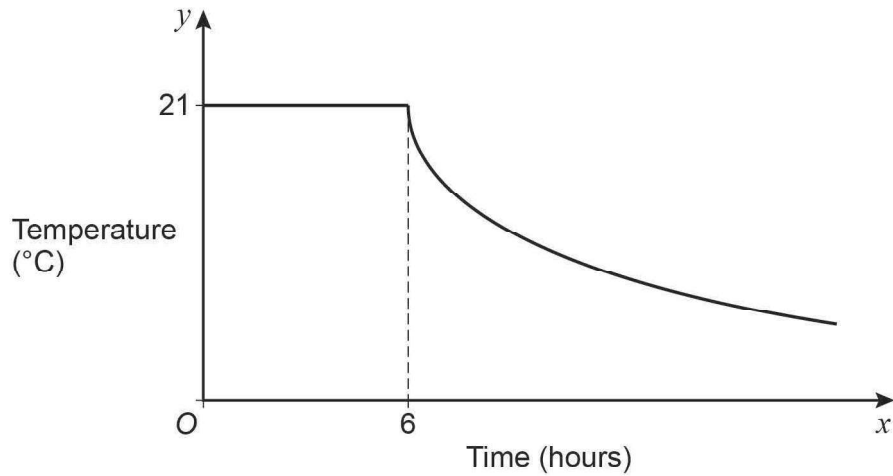


24

A room is kept at a constant temperature of 21°C for 6 hours.

The heating is then turned off and the room begins to cool.

Here is a sketch graph showing the temperature, $y^{\circ}\text{C}$, of the room at time x hours.



24 (a)

Assume the equation of the curved part is $y = \frac{k}{x}$ where k is a constant.

Work out the value of y when $x = 12$

[2 marks]

$y =$ _____



24 (b) In fact,

the equation of the curved part is $y = A \times \left(\frac{1}{3}\right)^{\frac{1}{6}x}$ where A is a **different** constant.

How does this affect the value of y when $x = 12$?

Tick **one** box.

You **must** show working to support your answer.

[2 marks]

☐

The value of y is greater than the answer to part (a).

☐

The value of y is less than the answer to part (a).

☐

The value of y is the same as the answer to part (a).

Turn over for the next question

4

Turn over ►



Here is a right-angled triangular prism.



Work out the total length of **all** of the edges of the prism.

[5 marks]

Answer cm

END OF QUESTIONS

