

HIGHER TIER
MINI PRACTICE EXAM 1

CALCULATOR ALLOWED
20 MINUTES ALLOWED

1.

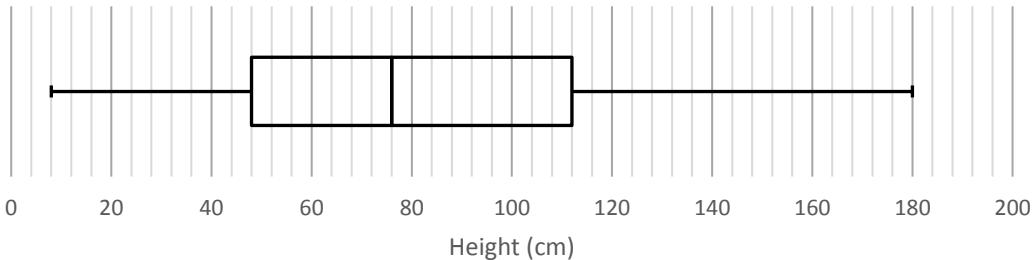
Alice is preparing hot drinks for an event.
She needs to make 90 cups of coffee and 125 cups of tea.
Each cup of coffee requires 6 grams of coffee.
Each cup of tea requires 1 teabag.
Coffee is sold in 150 gram jars which cost £3.50 each.
Teabags are sold in boxes of 80 which cost £3.20 each.

How much will it cost to buy the coffee and tea that she needs?

(5)

2.

The box plot below shows the scores a group of people scored in a game.



(a) Find the interquartile range.

(2)

(b) What percentage of the group scored more than 112?

(1)

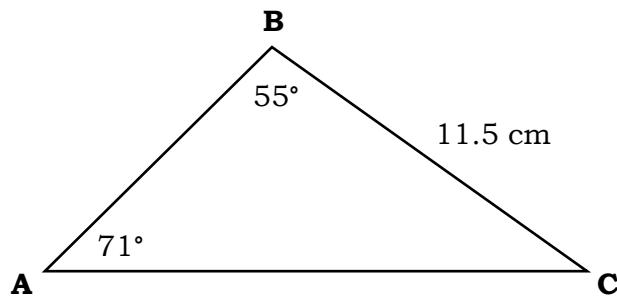
3.

Find the solutions to the equation $4x^2 + 11x - 1 = 0$ to 2 decimal places.

(3)

4.

Find the length of AC, to 3 significant figures.

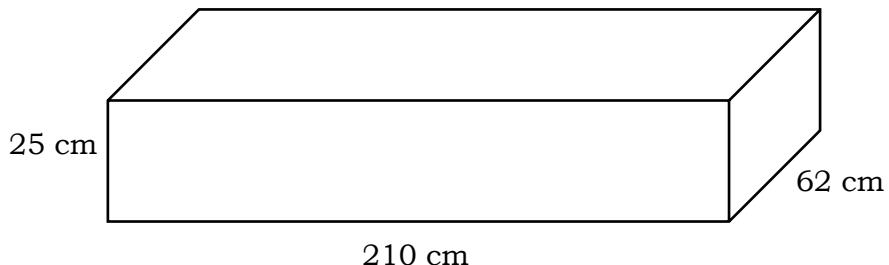


(3)

5.

The container below is filled with water to 65% of its full capacity.
Water leaks from the container at a rate of 30 millilitres per second.

$$1 \text{ litre} = 1000 \text{ cm}^3$$



Jim says "It will take more than 2 hours for the container to be emptied".
Is Jim correct?

(6)