

**HIGHER TIER  
MINI PRACTICE EXAM 1**

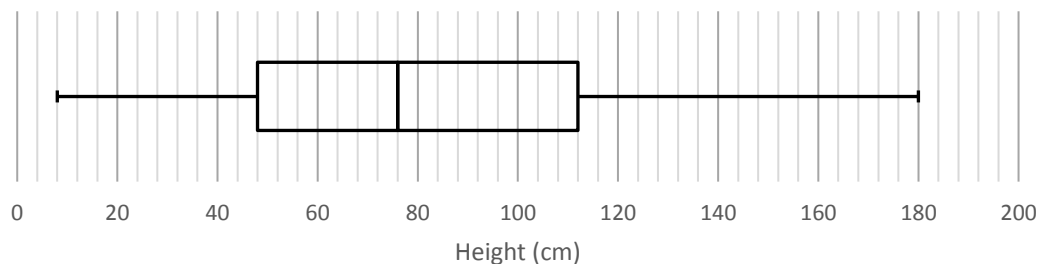
**CALCULATOR ALLOWED  
20 MINUTES ALLOWED**

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?

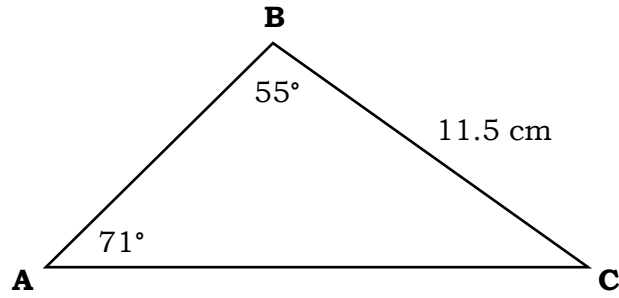
(1)

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.

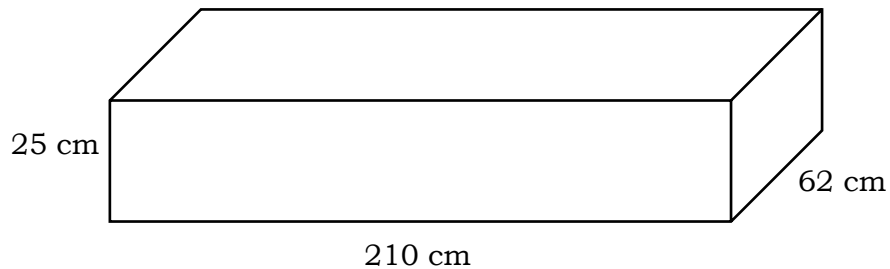


(3)

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



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

(6)