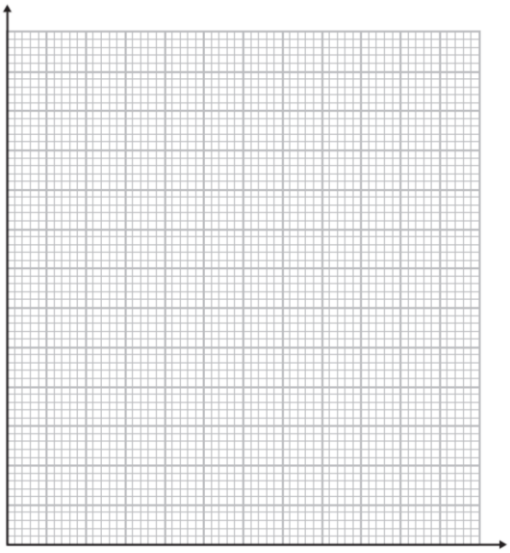
Cumulative Frequency Exam Practice

1 a) A farmer takes a sample of his pumpkins and weighs them. Complete the table. [2]

Weight g (grams)	Frequency	Cumulative Frequency
$100 \leq g < 150$	10	
$150 \leq g < 200$	15	
$200 \leq g < 250$	28	
$250 \leq g < 300$	22	
$300 \leq g < 350$	14	

b) Draw the cumulative frequency diagram below.

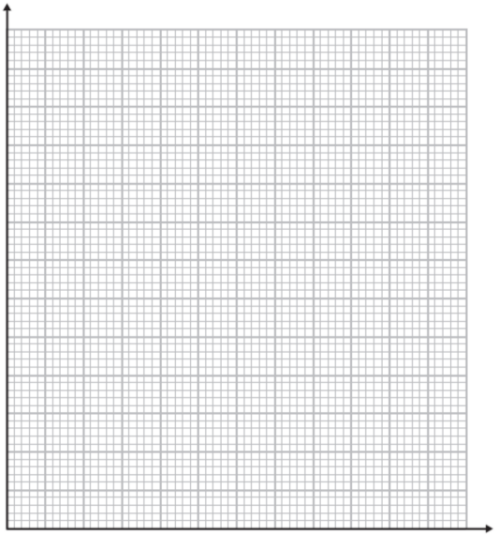


[2]

2 a) In year 10, the heights of 120 pupils are summarised below. Complete the table. [2]

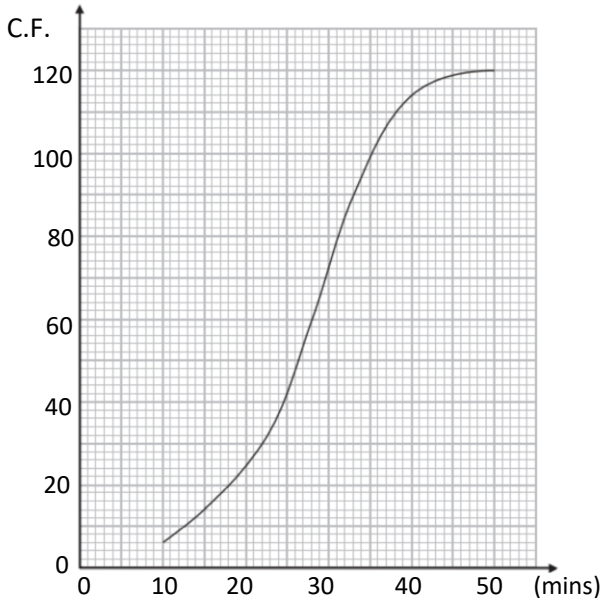
Height h (cm)	Frequency	Cumulative Frequency
$150 \leq h < 160$	21	
$160 \leq h < 170$	25	
$170 \leq h < 180$		82
$180 \leq h < 190$		114
$190 \leq h < 200$		

b) Draw the cumulative frequency diagram below.



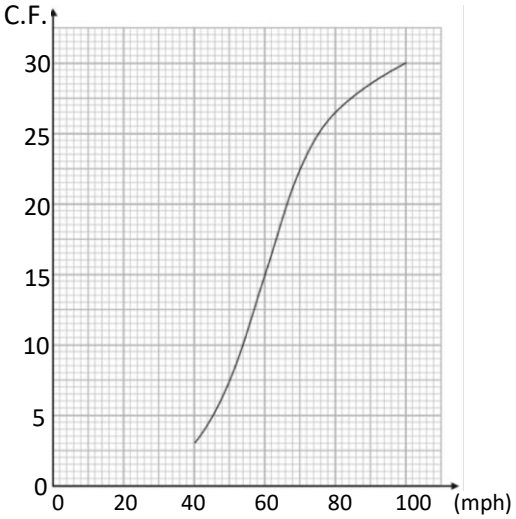
[2]

3) Below is a cumulative frequency graph for the times taken to solve a puzzle.



Estimate the median, upper & lower quartiles [3]

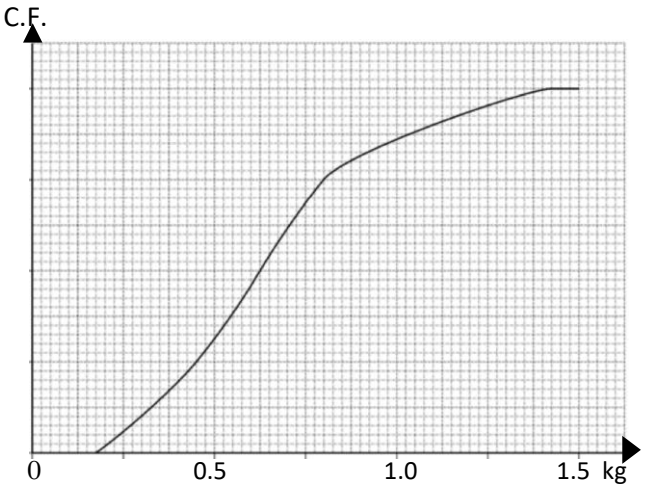
4) Below is a cumulative frequency graph for the speeds of cars passing under a bridge.



[4]

Estimate the numbers of cars travelling:
(i) more than 52 mph (ii) less than 90 mph
What % of cars are moving between 40 & 70mph?

5. The graph below shows the distribution of the weights of 40 mangoes in Tim's field.

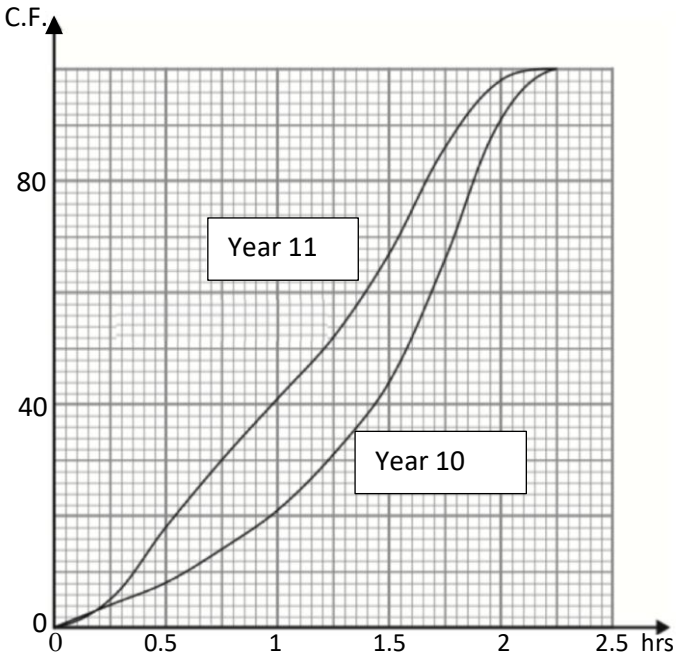


a) Find the weight of a mango which corresponds to the upper quartile. [1]

b) Estimate the % of mangoes which weigh between 750g and 1100g [2]

c) Tim only sells mangoes weighing more than 0.6kg. Estimate how many he will sell. [1]

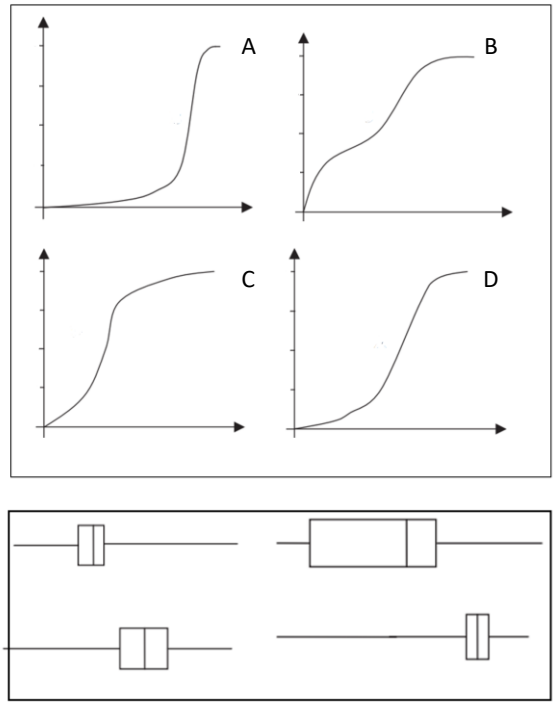
6. This cumulative frequency graph show the amount of time spent on homework per night.



a) How many pupils were surveyed in total? [1]

b) Make 2 comparisons between the distribution of the amount of homework time spent by year 10 and year 11 pupils. [3]

7. Match each cumulative graph to the box plot by writing the appropriate letter next to each box plot. [3]



8. Roger has drawn the cumulative frequency graph to display the heights of trees in the local woodland. Identify three mistakes he has made. [3]