

Name: _____

ASM Tuition Academy
Cumulative Frequency

Instructions:

- Use **black** ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided
- there may be more space than you need.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all you're working out**.

Information:

- The marks for each question are shown in brackets
- use this as a guide as to how much time to spend on each question.

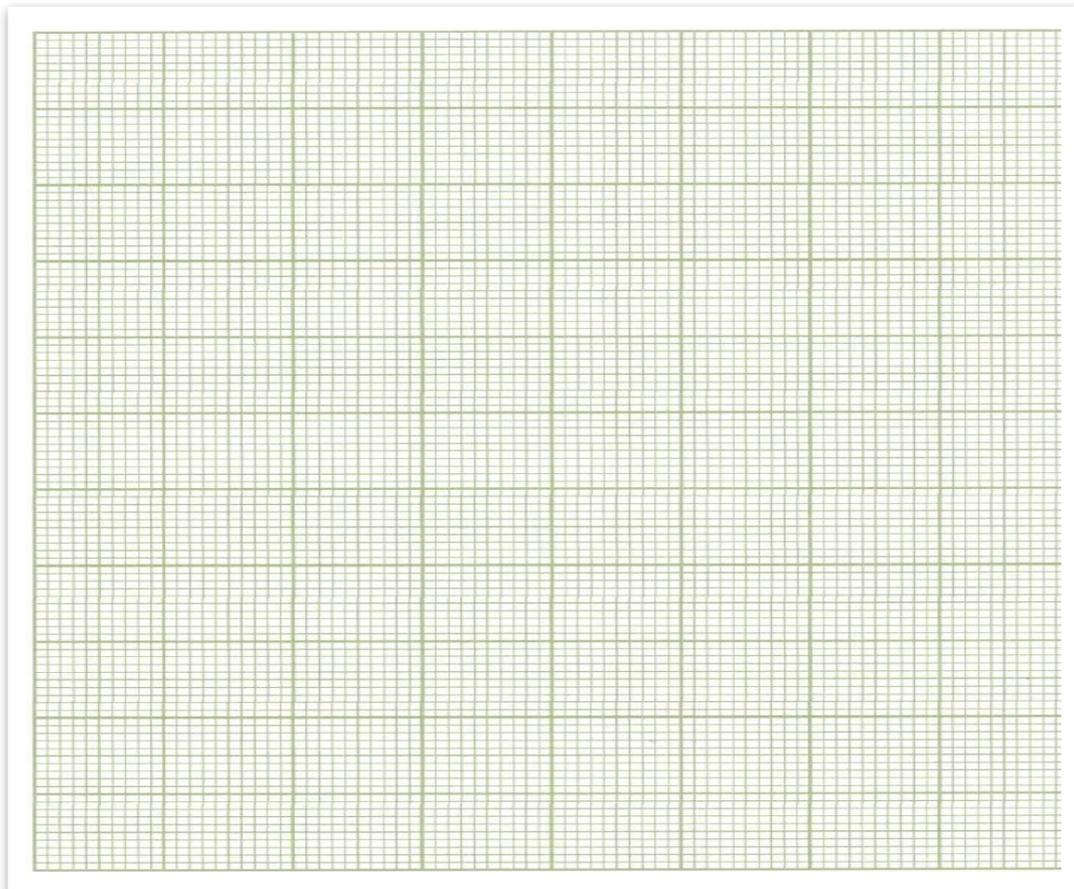
Advice:

- Read each question carefully before you start to answer it.
- Keep an eye on time.
- Try to answer every question.
- Check your answers if you have time at the end.

1. The cumulative frequency table shows the height, in cm, of some potato plants.

Height	Cumulative Frequency
$120 < h \leq 130$	5
$120 < h \leq 140$	12
$120 < h \leq 150$	26
$120 < h \leq 160$	39
$120 < h \leq 170$	48
$120 < h \leq 180$	60

a) On the grid, plot a cumulative frequency graph for this information.

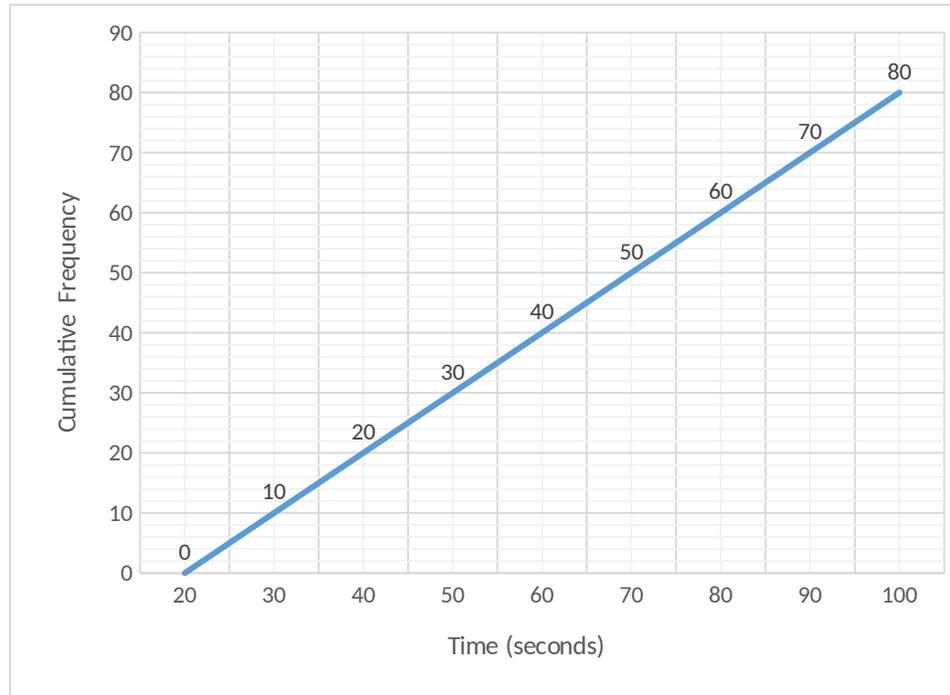


b) Find the median height.

_____ cm

(Total for question 1 is 3 marks)

2. The cumulative frequency graph gives some information the times it took people to complete a challenge.



- a) Find the median time.

- b) Find the number of people who took longer 70 seconds to complete the challenge.

(Total for question 2 is 2 marks)

3. The frequency table shows the weight, in kg, of some dogs.

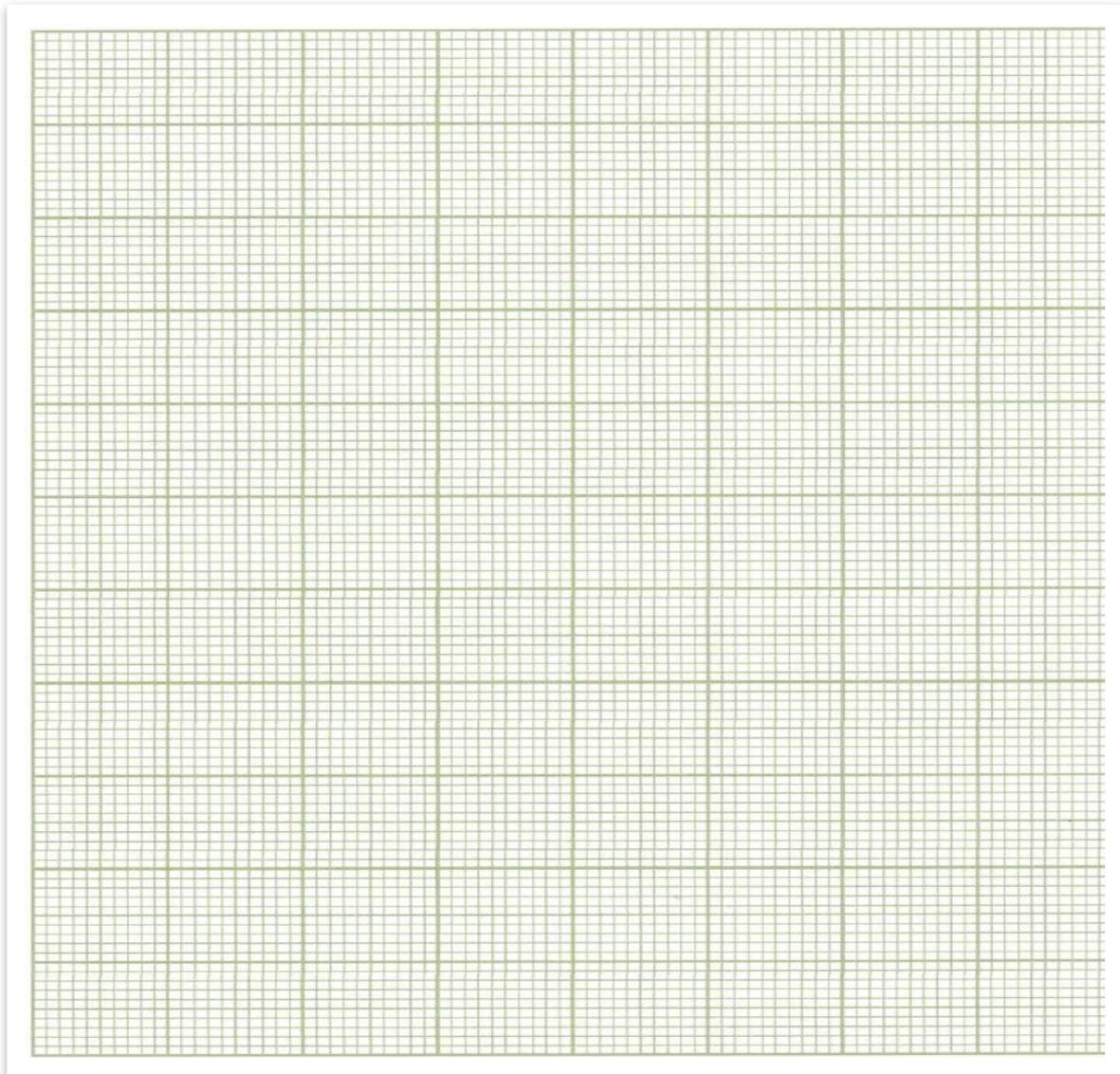
Weight (kg)	Frequency
$0 < w \leq 2$	2
$2 < w \leq 4$	17
$4 < w \leq 6$	24
$6 < w \leq 8$	23
$8 < w \leq 10$	10
$10 < w \leq 12$	4

a) Complete the cumulative frequency table.

Weight (kg)	Cumulative Frequency
$0 < w \leq 2$	
$0 < w \leq 4$	
$0 < w \leq 6$	
$0 < w \leq 8$	
$0 < w \leq 10$	
$0 < w \leq 12$	

b) On the grid opposite draw a cumulative frequency graph for this information.

c) Use your cumulative frequency graph to find an estimate for the interquartile range.

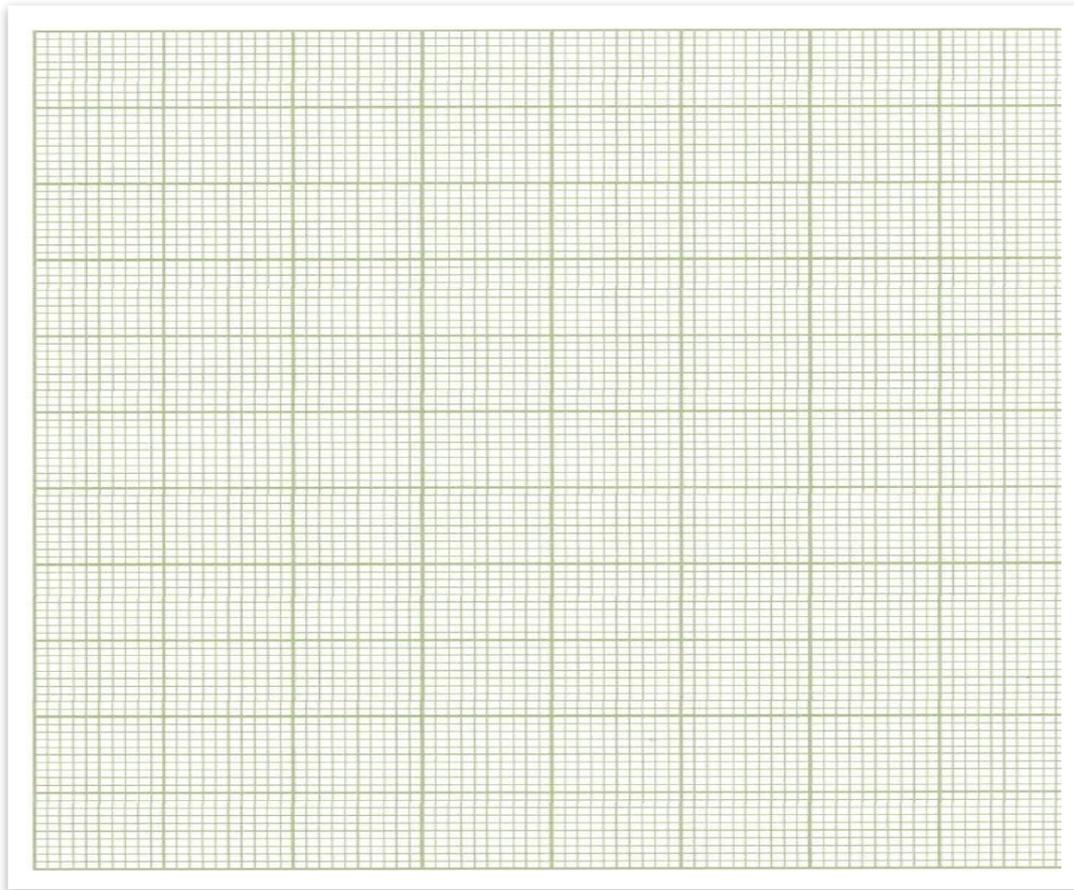


(Total for question 3 is 5 marks)

4. The frequency table shows the time taken for 85 people to travel to an event.

Time (minutes)	Frequency
$5 < t \leq 10$	6
$10 < t \leq 15$	12
$15 < t \leq 20$	18
$20 < t \leq 25$	22
$25 < t \leq 30$	14
$30 < t \leq 35$	13

a) On the grid, plot a cumulative frequency graph for this information.



b) Find an estimate for the median time taken.

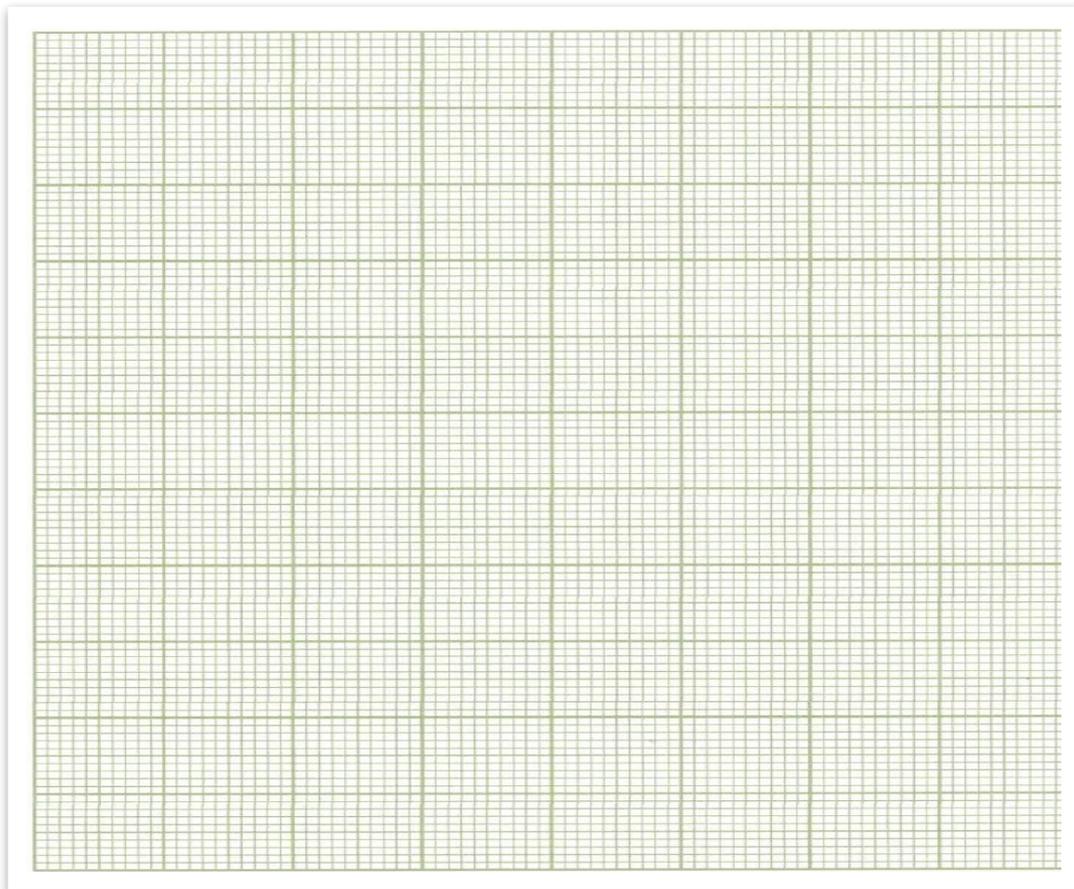
_____ minutes

(Total for question 4 is 3 marks)

5. The frequency table shows the speed of 60 motor bikes.

Speed (km/h)	Frequency
$0 < s \leq 10$	5
$10 < s \leq 20$	10
$20 < s \leq 30$	13
$30 < s \leq 40$	9
$40 < s \leq 50$	19
$50 < s \leq 60$	4

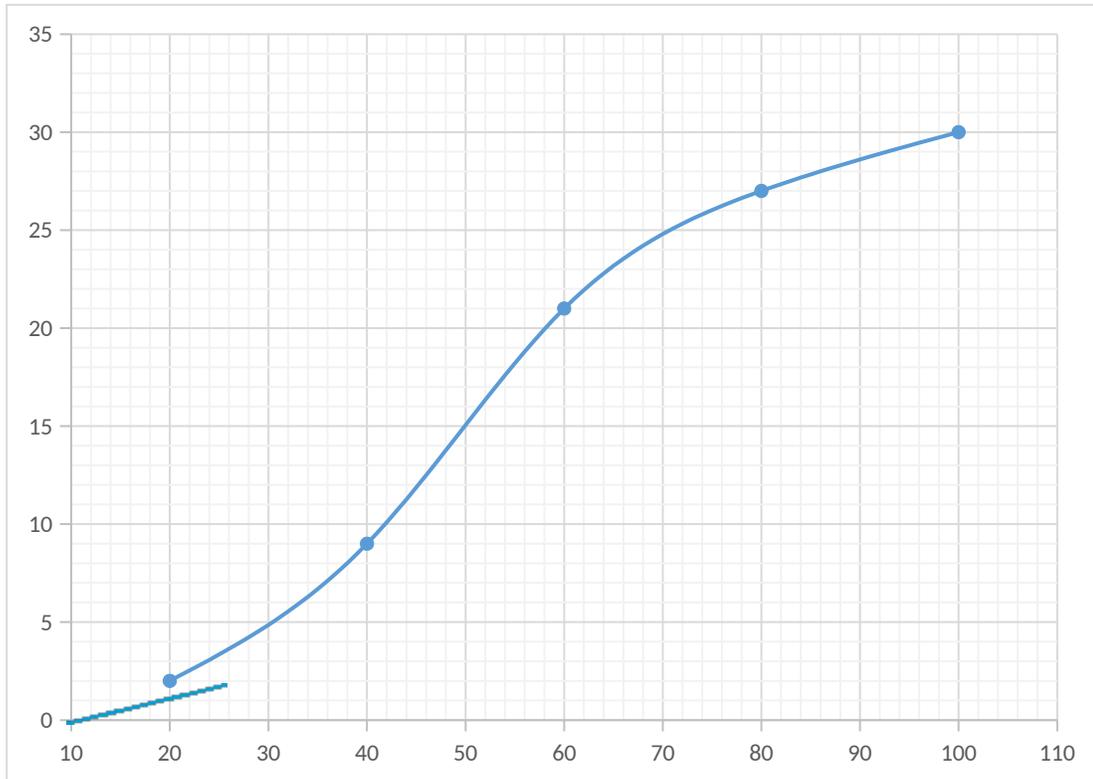
a) On the grid, plot a cumulative frequency graph for this information.



b) Find an estimate for the number of motor bikes travelling over 40 km/h.

(Total for question 5 is 3 marks)

6. The cumulative frequency graph gives some information about the weights of some objects.



- a) Find the median weight.

_____ g

- b) Find the inter quartile range.

_____ g

(Total for question 6 is 3 marks)
