AVERAGES AND RANGE

QUESTION 1

The stem and leaf diagram shows number of books read by 25 students from College **A**.

4	0 9
5	1 3 5 6 7
6	2 3 3 4 5 6 7 9
7	0 7 7 8 9 9
8	1 2 3 5

Key:
4 | 0 represents 40

The number of books read by 25 students from College **B** was also recorded.

The median number of books read was 69
The range of the number of books read was 57

Compare the distribution of the number of books read by the students from College **A** with the distribution of the number of books read by the students from College **B**.

.....

.....

.....

.....

.....

.....

.....

.....

(4 marks)

QUESTION 2

Lola has 16 crates.

The mean weight of the 16 crates is 50 kg.
The mean weight of 6 of the crates is 40 kg.

Work out the mean weight of the other 10 crates.

..... kg

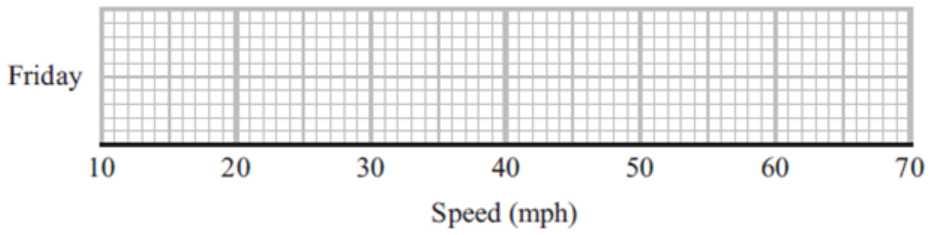
(3 marks)

QUESTION 3

Miranda records the speeds, in mph, of some lorries on a road on Friday.
She uses her results to work out the information in this table.

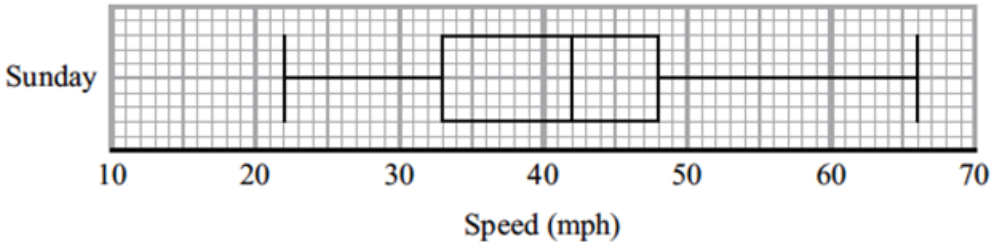
	Speed (mph)
Lowest speed	15
Lower quartile	25
Median	30
Interquartile range	14
Range	35

(a) On the grid, draw a box plot to show the information in the table.



(3)

Miranda also records the speeds of some cars on the same road on Sunday.
She uses her results to draw this box plot.



(b) Compare the distribution of the speeds of the lorries on Friday with the distribution of the speeds of the cars on Sunday.

.....

.....

.....

.....

(2)

Question 4

Astrid works at a weather station.
The table gives information about the temperature, T °C, at midday for each of 40 towns in Norway on Friday.

Temperature (T °C)	Frequency
$0 < T \leq 5$	2
$5 < T \leq 10$	6
$10 < T \leq 15$	11
$15 < T \leq 20$	16
$20 < T \leq 25$	5

(a) Calculate an estimate for the mean temperature.

(4)

Astrid says,

"The median temperature is 12.5 °C because 12.5 is the middle number in the middle group."

(b) Is Astrid correct?
Give a reason for your answer.

.....

.....

.....

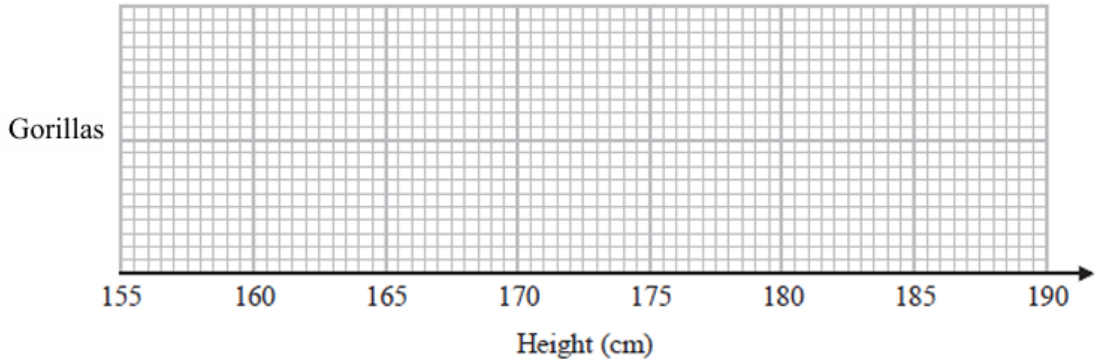
(1)

Question 5

The table shows some information about the heights of a group of gorillas.

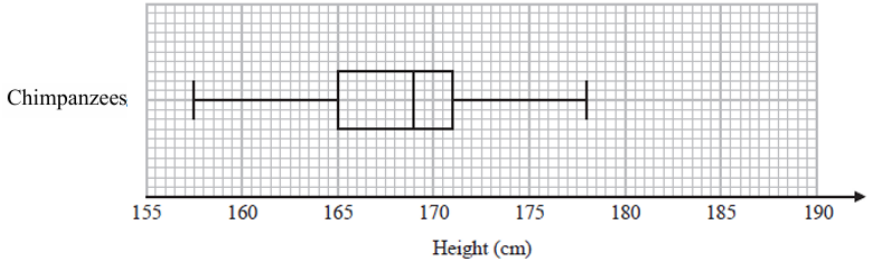
least height	159 cm
greatest height	188 cm
median	179 cm
lower quartile	172 cm
upper quartile	182 cm

(*a*) On the grid, draw a box plot for the information in the table.



(3)

The box plot below shows the distribution of the heights of a group of chimpanzees.



(*b*) Compare the distribution of the heights of the gorillas with the distribution of the heights of the chimpanzees.

.....

.....

.....

.....

(2)

Question 6

There are 35 women and 25 men at a supermarket checkout.

The mean cost of shopping of all 60 people is £45.20

The mean cost of shopping of the 25 men is £41.84

Work out the mean cost of shopping of the 35 women.

£.....

(3 marks)

Question 7

The table shows the amount of rain, in cm, that fell each day for 30 days.

Amount of rain (s cm)	Frequency
$0 \leq s < 10$	11
$10 \leq s < 20$	8
$20 \leq s < 30$	6
$30 \leq s < 40$	4
$40 \leq s < 50$	1

Work out an estimate for the mean amount of rain per day.

..... cm

(3 marks)

Question 8

--The table shows information about the heights, in cm, of a group of chimpanzees.

least height	152 cm
median	164 cm
greatest height	168 cm

This stem and leaf diagram shows information about the heights, in cm, of a group of 15 bonobo monkeys.

15	7 9 9
16	4 5 7 7 8
17	0 3 4 4 7
18	0 3

Key: 15 | 8 represents 158 cm

Compare the distribution of the heights of the chimpanzees with the distribution of the heights of the bonobo monkeys.

.....

.....

.....

.....

.....

3

Question 9

The table gives information about the times taken, in seconds, by 30 students to run a race.

Time (t seconds)	Frequency
$5 < t \leq 10$	5
$10 < t \leq 15$	7
$15 < t \leq 20$	8
$20 < t \leq 25$	10

Work out an estimate for the mean time.
Give your answer correct to 3 significant figures.

----------**(4)**