

Statistics Toolkit

Question Paper

Course	Edexcel IGCSE Maths
Section	6. Statistics & Probability
Topic	Statistics Toolkit
Difficulty	Easy

Time allowed: 60
Score: /45
Percentage: /100

Question 1

15 people were asked how long, in minutes, they had been waiting for a bus.

Here are the results.

2 3 3 4 5 6 6 8 9 10 11 13 14 15 18

Find the interquartile range of these times.

[2 marks]

Question 2

Here is the number of goals that Henri's team scored one summer in each water polo match.

5 8 9 11 13 13 14 15 16 17 20

Find the interquartile range of the numbers of goals.

Show your working clearly.

[2 marks]

Question 3

Twenty students took a Science test and a Maths test.

Both tests were marked out of 50

The table gives information about their results.

	Median	Interquartile range
Science	27	18
Maths	24.5	11

Use this information to compare the Science test results with the Maths test results.

Write down **two** comparisons.

[2 marks]

Question 4

The table shows information about the weights, in kg, of 40 parcels.

Weight of parcel (p kg)	Frequency
$0 < p \leq 1$	19
$1 < p \leq 2$	12
$2 < p \leq 3$	5
$3 < p \leq 4$	2
$4 < p \leq 5$	2

Write down the modal class.

[1 mark]

Question 5

The students in Class A and in Class B take the same examination.

The lowest score in Class A is 39

The range of scores for Class A is 57

The lowest score in Class B is 33

The range of scores for Class B is 60

Find the range of scores for all the students in both classes.

[3 marks]

Question 6

The table gives information about the speeds, in kilometres per hour, of 80 motorbikes as each pass under a bridge.

Speed (s kilometres per hour)	Frequency
$40 < s \leq 50$	10
$50 < s \leq 60$	16
$60 < s \leq 70$	19
$70 < s \leq 80$	23
$80 < s \leq 90$	12

Write down the modal class.

[1 mark]

Question 7

The table gives information about the length of time, in minutes, that each of 60 students took to travel to school on Monday.

Length of time (t minutes)	Frequency
$0 < t \leq 10$	4
$10 < t \leq 20$	10
$20 < t \leq 30$	15
$30 < t \leq 40$	25
$40 < t \leq 50$	6

Write down the modal class interval.

[1 mark]

Question 8

15 students took an English test.

The same 15 students took a Maths test.

Both tests were marked out of 30.

For the English test results

the median was 21

the interquartile range was 14

The Maths test results are shown below.

18 18 19 20 24 25 25 26 28 28 29 29 29 30 30

Use the information above to compare the English test results with the Maths test results.

Write down **two** comparisons.

[4 marks]

Question 9a

Kim works at an airport in the UK.

She records the number of planes landing between 10 am and 2 pm each day.

The table shows the data for the first 10 days in January.

Day	1	2	3	4	5	6	7	8	9	10
Number of planes	148	151	147	155	153	147	155	102	151	154

The airport was affected by fog on one of the days.

Which day do you think it was?

Give a reason for your answer.

[1 mark]

Question 9b

Kim uses the data to predict how many planes will land at the airport in a year.

In her method, she

- uses an estimate of 150 planes in each 4-hour period throughout the day
- assumes the same number of planes each day.

Work out her prediction.

[3 marks]

Question 9c

In fact,

- fewer planes land in winter than in summer
- fewer planes land at night than during the day.

What does this tell you about Kim's prediction?

Tick **one** box.

- Her prediction is too low
- Her prediction is too high
- Her prediction could be too low or too high

Give a reason for your answer.

[2 marks]

Question 10

100 men and 100 women took a test.

Scores

	Median	Interquartile range	Range
Men	28	7.5	31
Women	30	9	37

Using this data, which statement **must** be true?

Tick **one** box.

- Men had a higher average score than women
- Men had more consistent scores than women
- A woman had the highest score
- A man had the lowest score

[1 mark]

Question 11

In one month, the number of hours of exercise taken by 10 people are

4 7 2 8 6 5 1 8 2 3 9

Which is the appropriate average to use in this situation?

Tick a box.

Mean Median Mode

Give one reason for each of the other two averages as to why they are **not** appropriate.

[2 marks]

Question 12

Six positive numbers have

a mean of 10

a range of 19

Four of the numbers are 12 7 15 3

Work out the other two numbers.

[3 marks]

Question 13

A station manager looks at the information below.

Number of minutes late, t	Number of trains
$0 \leq t < 2$	12
$2 \leq t < 4$	0
$4 \leq t < 6$	7
$6 \leq t < 8$	0
$8 \leq t < 10$	0
$10 \leq t < 12$	1

Estimate the mean number of minutes late.

[1 mark]

Question 14

The mean mass of a squad of 19 hockey players is 82 kg

A player of mass 93 kg joins the squad.

Work out the mean mass of the squad now.

.....kg

[3 marks]

Question 15

The table shows information about the times for 10 people to complete a task.

Time, t (minutes)	Frequency
$0 < t \leq 20$	1
$20 < t \leq 40$	6
$40 < t \leq 60$	3

These statements are about the mean and range of the actual times.

Tick the correct box for each statement.

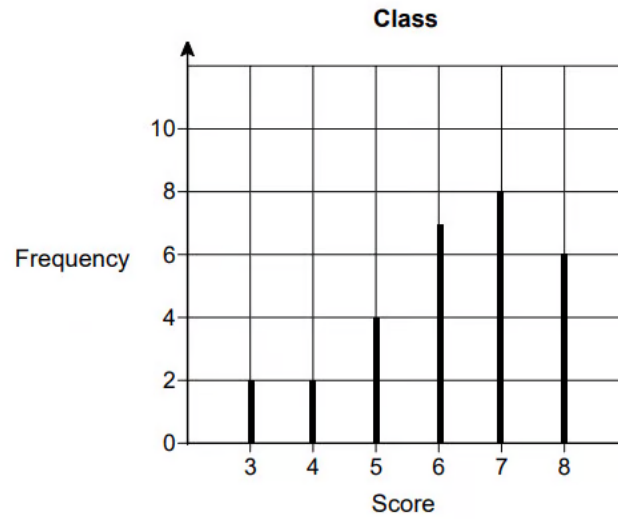
	True	False
The mean could be less than 20 minutes	<input type="checkbox"/>	<input type="checkbox"/>
The mean could be more than 40 minutes	<input type="checkbox"/>	<input type="checkbox"/>
The mean could be less than 40 minutes	<input type="checkbox"/>	<input type="checkbox"/>
The range could be more than 40 minutes	<input type="checkbox"/>	<input type="checkbox"/>
The range could be less than 40 minutes	<input type="checkbox"/>	<input type="checkbox"/>
The range could be more than 60 minutes	<input type="checkbox"/>	<input type="checkbox"/>

[4 marks]

Question 16

Students in a class took a spelling test.

The diagram shows information about the scores.



Lucy is one of the 29 students in the class.

Her score was the same as the **median** score for her class.

Work out her score.

[2 marks]

Question 17

Ping chooses four numbers.

The mode of these four numbers is 8, the range is 7 and the mean is 11.

Find Ping's four numbers.

[3 marks]

Question 18

Jenny played four games of golf.

For these games her modal score was 76 and her mean score was 75.

Her range of scores was 10.

What were her scores for the four games?

[4 marks]