

Data Collection – GCSE Statistics

1. No.2

2

What is the statistical name given to the removal or correction of apparently incorrect values from a table or spreadsheet?

Circle your answer.

[1 mark]

sampling

convenience

cleaning

biased

2. No.4

4

Which of these sample sizes from a large population gives the most reliable sample?

Circle your answer.

[1 mark]

10

20

100

500

3. No.5(a, b)

5

Antonio makes and sells flower displays.
He keeps a record of each display he makes.
Below is one of his completed records.

Order reference:	<i>57ah</i>		Customer name:	<i>Mrs Howe</i>
Flowers:	<i>Rose</i>		Colour:	<i>Red</i>
Base used:	<i>Teapot</i>		Number of flowers used:	<i>9</i>
Cost to make (£):	<i>4.20</i>			
Selling price (£):	<i>8.50</i>			

- 5 (a) Write down **one** qualitative variable from the record. *qualitative means non-numerical* [1 mark]

Colour or Customer name or Base Used or Flowers

- 5 (b) (i) Write down **one** quantitative variable from the record. *quantitative means numerical.* [1 mark]

Cost to make or Selling Price or Number of flowers used

- 5 (b) (ii) Is your quantitative variable discrete or continuous?

Tick (✓) a box.

[1 mark]

Discrete ☒ Continuous ☐
(countable) (Measurable)

4. No.4

4

Which of these is **not** a method of sampling, but is a procedure of categorisation which may be used before sampling takes place?

Circle your answer.

[1 mark]

stratification

systematic

quota

random

5. No.9

9 (a) Here are the descriptions of some sets of data.

Draw a line to match each description with the type of data.

The first one has been completed for you.

[2 marks]

Description	Type of data
How likely students are to recommend studying GCSE Statistics. eg Very unlikely, unlikely, likely or very likely	Qualitative
Age group people are in. eg 11 – 12, 13 – 14, 15 – 16 or 17 – 18	Ordinal
People's eye colour. eg Blue, brown, green, hazel or other	Bivariate
Age and value of cars. eg £12 500 and 3 years old	Categorical

9 (b) Name the type of data that matches this description.

[1 mark]

A doctor collects patient data including: blood pressure, weight, height, cholesterol and diet.

multivariate

6. No.14

14

A professor believes that young people have faster reaction times if they listen to their favourite song whilst having their reaction time measured.

She sets up an experiment in which students hit a button when they see a light.

- Group A students do the experiment without listening to music
- Group B students do the experiment whilst listening to their favourite song

14 (a) What is the statistical name for Group A?

[1 mark]

Answer Control group

14 (b) The professor considers two ways of setting up the experiment.

Method 1 Ask for volunteers and randomly allocate them to Group A or Group B.

Method 2 Ask for volunteers and allow them to choose which Group to be in.

Make **one** comment about each method.

[2 marks]

Method 1 Is a good method because its not biased.

Method 2 Is a good method because it will be easier to carry out the experiment and is less time consuming.

7. No.13

13

In Vikram's village, there are 600 people.

He has sampled 50 of them.

32 of this sample would like a gym to be built.

Assume the sample is representative.

How many people would you expect, from the whole village, would like a gym to be built?

Circle your answer.

[1 mark]

32

192

216

384

$$\frac{32}{50} \times 600 = 384$$

8. No.3

3

Olivia wants to obtain a systematic sample of size 40 from a population of 2000 competitors in a race.

She numbers the competitors from 1 to 2000 and uses, as a starting point, competitor number 11

Circle the correct competitor number of the next person in her sample.

[1 mark]

12

21

51

61

$$n = \frac{2000}{40} = 50$$

$$\text{Next person} = n + 11 = 50 + 11 = 61$$

9. No.4

4

Which statistical term means 'the extent to which something gives results that are consistent'?

Circle your answer.

[1 mark]

reliability

validity

standard deviation

unbiased