Multiple choice questions - Sampling and scatter graphs

Year: Year 11 · 10

Question 1 A sample is

- ◯ **A.** the whole group
- ◯ **B.** a smaller group chosen from the population
- ◯ **C.** a biased group
- ◯ **D.** an average

Question 2 A stratified sample

- ◯ **A.** picks every 10th item
- ◯ **B.** takes proportional numbers from each group
- ◯ **C.** uses volunteers only
- ◯ **D.** uses the first 20

Question 3 Strong positive correlation means points

- ◯ **A.** slope up and are close to a line
- ◯ **B.** slope down
- ◯ **C.** are scattered
- ◯ **D.** are all the same

Question 4 Estimating inside the range of the data is

- ◯ **A.** extrapolation
- ◯ **B.** interpolation
- ◯ **C.** bias
- ◯ **D.** causation

Question 5 A line of best fit should

- ◯ **A.** join the first and last points
- ◯ **B.** go through the mean point and balance the points
- ◯ **C.** go through the origin
- ◯ **D.** miss all the points

Question 6 The best sample is

- ◯ **A.** small and biased
- ◯ **B.** large and random
- ◯ **C.** a volunteer group

◯ **D.** friends

Question 7 Correlation between two variables means

◯ **A.** one causes the other
◯ **B.** they are linked
◯ **C.** they are equal
◯ **D.** there is no pattern

Question 8 1000 people, 300 men. Stratified sample 50. Men:

◯ **A.** 10
◯ **B.** 15
◯ **C.** 20
◯ **D.** 30

Question 9 (Higher) 40 tagged, second sample 20 with 4 tagged. Population estimate:

◯ **A.** 50
◯ **B.** 200
◯ **C.** 80
◯ **D.** 800

Question 10 A negative correlation means

◯ **A.** both go up
◯ **B.** one goes up, the other goes down
◯ **C.** no relationship
◯ **D.** a perfect line

Answer grid - Sampling and scatter graphs

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Question	Answer	Explanation
1	**B**	Part of the population.
2	**B**	Proportional to group size.
3	**A**	Positive and strong.
4	**B**	Interpolation.
5	**B**	Fit the trend.
6	**B**	Representative.
7	**B**	A link, not necessarily causation.
8	**B**	0.3 x 50.
9	**B**	40x20/4.
10	**B**	Opposite directions.