

# Test Paper 1 Solutions

Code: 2026/DataHandling/C7/01

- Given the mean of the observations is 11, we have:

$$\frac{x + (x + 2) + (x + 4) + (x + 6) + (x + 8)}{5} = 11$$

Solving for  $x$ :

$$5x + 20 = 55 \implies 5x = 35 \implies x = 7$$

The first three observations are  $x$ ,  $x + 2$ , and  $x + 4$ :

7, 9, 11

Mean of the first three observations:

$$\frac{7 + 9 + 11}{3} = \frac{27}{3} = 9$$

9

- A pie chart represents data as a circle of 360 degrees.

$$25\% \text{ of } 360^\circ = 0.25 \times 360^\circ = 90^\circ$$

90

- The mode is the number that appears most frequently. The data set is: 2, 3, 5, 3, 4, 7, 3, 2, 1, 7, 3  
The number 3 appears 4 times, which is more frequent than any other number. 3

- The difference between the highest and lowest observations in a data set is called the range. Range

- To represent the comparison of two sets of data simultaneously, we use a double bar graph. Double Bar Graph

- The first five prime numbers are 2, 3, 5, 7, 11. Mean:

$$\frac{2 + 3 + 5 + 7 + 11}{5} = \frac{28}{5} = 5.6$$

5.6

- The data set in ascending order is: 11, 12, 14, 18,  $x + 2$ ,  $x + 4$ , 30, 32, 35, 41 The median of 10 observations is the average of the 5th and 6th terms:

$$\frac{(x + 2) + (x + 4)}{2} = 24 \implies \frac{2x + 6}{2} = 24 \implies 2x + 6 = 48 \implies 2x = 42 \implies x = 21$$

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- In a bar graph, the width of the bars does not have mathematical significance.  
Does not have mathematical significance

9. The incorrect total sum is  $40 \times 10 = 400$ . The correct total sum is  $400 - 15 + 45 = 430$ .

The correct mean is:

$$\frac{430}{10} = 43$$

43

10. The probability of drawing a red ball is:

$$\frac{4}{4+6} = \frac{4}{10} = \frac{2}{5}$$

$\frac{2}{5}$

11. The measure of central tendency most affected by extreme values is the mean.

Mean

12. The data collected directly from the source is called primary data.

Primary Data

13. The percentage is:

$$\frac{144}{360} \times 100 = 40\%$$

40%

14. The mode is always one of the numbers in the data.

Mode

15. The total sum of five numbers is  $27 \times 5 = 135$ . The total sum of four numbers is  $25 \times 4 = 100$ . The excluded number is:

$$135 - 100 = 35$$

35