General Mathematics Unit 1 & 2 — Practice Exam 2 — Answers & Explanations

Answers to the 15 questions in the free preview.

General Mathematics

1. C. Minimum, Q1, median, Q3, maximum

The five-number summary is: minimum, first quartile (Q1), median, third quartile (Q3), and maximum.

2. D. The interquartile range (IQR)

The box in a boxplot spans from Q1 to Q3, so its length represents the interquartile range.

3. B. Positively skewed

A long tail toward higher values (to the right) indicates a positively skewed distribution.

4. C. A positive correlation

When one variable increases as the other increases (points trend upward), this is a positive correlation.

5. A. A sample is a subset of the whole population being studied

A population is the entire group being studied, while a sample is a subset of that population used to make inferences about it.

6. See explanation below — this question is not auto-marked.

Model answer: with 8 ordered values, median = average of the 4th and 5th values = (9 + 12)/2 = 10.5. Lower half (4,7,7,9): Q1 = (7+7)/2 = 7. Upper half (12,14,15,22): Q3 = (14+15)/2 = 14.5. IQR = Q3 − Q1 = 14.5 − 7 = 7.5. Award marks for correctly splitting the data and correctly computing each quartile.

7. See explanation below — this question is not auto-marked.

Model answer: a positively skewed data set has a long tail of high values extending to the right, with most data clustered at the lower end. Because the mean is sensitive to extreme high values (they pull it upward), the mean is typically greater than the median in a positively skewed distribution. Award marks for a correct description of skew and the correct mean-median comparison.

8. See explanation below — this question is not auto-marked.

Model answer: mean = (12+15+18+20+25)/5 = 90/5 = 18. Range = 25 − 12 = 13. Award marks for correct sum/division for the mean and correct max-min for the range.

9. See explanation below — this question is not auto-marked.

Model answer: IQR = Q3 − Q1 = 25 − 15 = 10. Upper boundary = Q3 + 1.5 × IQR = 25 + 15 = 40. Any value above 40 would be classified as an outlier. Award marks for the correct IQR calculation and correctly applying the 1.5 × IQR rule.

10. D. Compound interest is calculated on the principal plus previously earned interest

Compound interest is calculated on the growing balance (principal plus previously earned interest), while simple interest is always calculated on the original principal only.

11. B. $2040

A = P(1 + r) = 2000 × 1.04 = $2080 (equivalently, interest = 2000 × 0.04 = $80, plus the $2000 principal).

12. C. 0.07

To convert a percentage to a decimal for calculations, divide by 100: 7% = 0.07.

13. A. The value decreases by the same dollar amount each year

Straight-line depreciation reduces an asset's value by a fixed dollar amount (or fixed percentage of the original value) every year.

14. C. The original loan amount for the entire loan term

A flat rate loan charges interest on the original principal for the whole term, regardless of how much has been repaid.

15. D. On the remaining balance after previous repayments

A reducing-balance loan charges interest only on the outstanding balance, so the interest amount decreases as the loan is paid down.

PREVIEW

That’s the end of the preview answers

These are the answers to the 15 preview questions. The full answer key covers all 30 questions in General Mathematics Unit 1 & 2 — Practice Exam 2, with the working behind every mark.

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