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Averages and Spread Measures

Student Worksheet

Questions & Working Space

IGCSE Mathematics

Name: _____

Date: _____

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Note

How to use this worksheet. These questions are built *strictly* on the *Averages and Spread Measures* notes: mean, median and mode for raw data and frequency tables, the estimated mean and modal class for grouped data, choosing an appropriate average, range, quartiles and the interquartile range, cumulative frequency graphs, box-and-whisker plots, and comparing two data sets.
Show the columns. For any frequency-table question, write out the fx (or fm) column in full — the method marks live there, not in the final answer.
Accuracy. Give exact answers where the division is exact; otherwise round to 2 decimal places (or 1 d.p. where the data is given to 1 d.p.) and say so. For grouped data, always describe the mean as an *estimate*.
Comparison questions. A comparison always needs *two* statements — one about an average, one about spread — and both must be written in the context of the question.
Checking your answers. Full step-by-step solutions, a marking scheme for the exam paper, and a quick answer key are in the separate booklet *"Averages and Spread Measures — Solutions & Answer Key."* Try each question honestly before you look.

1 Part I — Topic-by-Topic Exercises

1.1 The Mean

Exercise M1 *[Basic]*

Find the mean of: 12, 17, 9, 14, 8.

Exercise M2 *[Basic]*

Find the mean of: 23, 31, 18, 26, 27, 19.

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Exercise M3 *[Standard]*

The masses, in kilograms, of six parcels are:

$$2.4, \quad 3.1, \quad 1.8, \quad 2.9, \quad 3.4, \quad 2.0$$

Find the mean mass.

Exercise M4 *[Standard]*

The mean of eight numbers is 15.

(a) Find the total of the eight numbers.

(b) A ninth number, 24, is now included. Find the mean of all nine numbers.

Hint

Rearrange the mean formula: total = mean $\times$ number of values.

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Preview ends here

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