

Foundation GCSE: Averages and Range

Name: _____

Class: _____

Instructions: Answer all questions. Questions are ordered from easiest (1) to hardest (10). Working out should be shown where appropriate.

1. Calculate the mode of the dataset:

4, 2, 7, 4, 9, 4, 1, 8, 4, 3, 7

6. Calculate the median of an even set of ten numbers:

8, 12, 15, 19, 23, 27, 31, 35, 42, 48

2. Find the range of the numbers:

28, 15, 42, 8, 31, 19, 50, 12

3. Calculate the exact mean of the numbers:

14, 22, 9, 31, 18, 25, 12, 17, 26, 6

7. Eight numbers have a mean of 18.5. What is the total sum of these eight numbers?

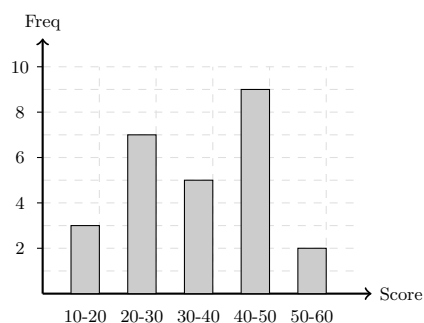
4. Find the median of the ordered list of eleven numbers:

5, 9, 12, 17, 22, 25, 29, 34, 41, 48, 53

8. Calculate the estimated mean from the expanded frequency table below using midpoint values:

Class	Midpoint (x)	Freq (f)
0 – 10	5	4
10 – 20	15	9
20 – 30	25	15
30 – 40	35	12

5. The bar chart below represents a frequency distribution of test scores across five distinct categories. Using the bar heights, grid lines, and scale, identify the modal score group and state its frequency.



9. If four numbers have a mean of 12.5, three numbers have a mean of 16.0, and five numbers have a mean of 8.2, calculate the overall combined mean of all twelve numbers.

10. Seven numbers have a median of 14, a mode of 9, and a mean of 13. If the smallest number is 6, find the largest number in the dataset.

Answers & Worked Solutions

1. 4
(occurs 4 times).
2. 42
(50 – 8).
3. 18
 $\left(\frac{180}{10}\right)$
4. 25
(6th term in sorted sequence).
5. 40 – 50 group
(frequency 9).
6. 25
 $\left(\frac{23 + 27}{2}\right)$
7. 148
(18.5 × 8).
8. 25.0
 $\left(\frac{1000}{40}\right)$
9. 11.5
 $\left(\frac{139}{12}\right)$
10. 23
(sum 91; 6, 9, 9, 14, 15, 15, 23).