Grouped Data, Percentiles & Modal Interval (Grade 10)

WORKSHEET

Name: ..... Class: .....

Date: .....

MARK ____ / 21

Answer all questions. Show all your working — marks are awarded for method as well as the final answer.

1 Write down the midpoint of the interval $20 \leq x < 30$. **(1)**

2 Using the table ($f = 4, 9, 14, 8, 5$ for intervals of width 10 from 0), estimate the mean. **(4)**

3 Write down the modal interval for that data. **(1)**

4 In which interval does the median lie for that data? **(2)**

5 Determine the position of the 25th percentile when $n = 40$. **(2)**

6 $Q_1 = 24$ and $Q_3 = 42$. Calculate the interquartile range. **(1)**

7 $Q_1 = 24$ and $Q_3 = 42$. Calculate the semi-interquartile range. **(2)**

8 Why can the mean of grouped data only be estimated? **(2)**

9 State TWO differences between a histogram and a bar graph. **(2)**

10 The bars of a histogram have frequencies 6, 10, 14, 9 and 5. How many values are in the data set, and which is the modal interval? **(2)**

11 Explain why the bars of a histogram must touch. **(2)**

TOTAL: 21 marks

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