



S03-10min Averages from a Frequency Table: 10-minute Pack

EDEXCEL 1ST0 · Calculator allowed · about 10 minutes

Total Marks

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Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Show all your working.

- 1** The number of magazines bought by 12 customers in a shop is shown below.

Magazines bought	1	2	3
Frequency	5	4	3

Write down the modal number of magazines bought.

(Total for Question 1 is 1 mark)

- 2** The ages, in years, of pupils in a small tutor group are shown below.

Age	9	10	11
Frequency	2	5	1

Write down the age that has a frequency of 5.

(Total for Question 2 is 1 mark)

- 3** The number of siblings reported by each pupil in a class is shown below.

Siblings	0	1	2	3
Frequency	4	5	3	2

Work out how many pupils were surveyed in total.

(Total for Question 3 is 1 mark)

- 4 State whether this is True or False: For a frequency table with n data values, the position of the median is found using $(n+1)$ divided by 2.

(Total for Question 4 is 1 mark)

- 5 The number of pets owned by 12 families is shown below.

Pets owned	0	1	2	3
Frequency	4	5	2	1

Work out the median number of pets owned.

(Total for Question 5 is 2 marks)

- 6 The number of texts sent in one evening by 10 students is shown below.

Texts sent	0	1	2	3
Frequency	2	3	4	1

Calculate the mean number of texts sent.

(Total for Question 6 is 2 marks)

- 7 A shoe shop records the sizes of 40 pairs of trainers sold in a week, to help decide which sizes to reorder.

Shoe size	4	5	6	7	8
Frequency	2	8	18	9	3

Which average (mode, median or mean) would be most useful to the manager when deciding which size to order more of? Give a reason for your answer.

(Total for Question 7 is 2 marks)

Mark scheme · S03-10min Averages from a Frequency Table: 10-minute Pack

Question 1

- **B1** 1 cao
- **Answer: 1**

Question 2

- **B1** 10 cao
- **Answer: 10**

Question 3

- **B1** 14 cao
- **Answer: 14**

Question 4

- **B1** True cao
- **Answer: True**

Question 5

- **M1** identifies the median position as $\text{half}(12+1) = 6.5\text{th}$ value (mean of 6th and 7th values), using cumulative frequencies 4, 9, 11, 12
- **A1** 1 cao
- **Answer: 1**

Question 6

- **M1** $0 \times 2 + 1 \times 3 + 2 \times 4 + 3 \times 1 (=14)$, oe
- **A1** 1.4 cao
- **Answer: 1.4**

Question 7

- **B1** identifies the mode as the most useful average for this purpose
- **B1** valid justification, e.g. the mode shows the size that sold the most (size 6, frequency 18), so it tells the manager which size to reorder more of; the mean or median might not match a real, whole shoe size that needs restocking
- **Answer: Mode**