GCSE HIGHER · REVISION MAT 2

Averages, spread and box plots

1 Find the mode of

4, 7, 4, 9, 7, 4, 2

2 Find the mean of

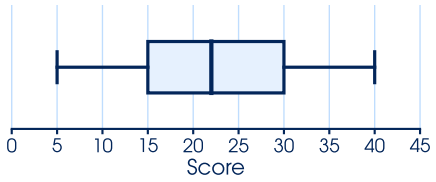
12, 15, 9, 18, 21

3 Explain why the range is affected by an outlier but the interquartile range is not.

4 Find the mean number of pets.

Pets	0	1	2	3
Frequency	6	9	3	2

5 Show that the median is 22 and the range is 35.



6 Class A: median 62, IQR 15.

Class B: median 58, IQR 8.

Compare the two classes.

7 Show that an estimate of the mean height is 166.2 cm.

Height, *h* (cm)	Frequency
$150 < h \leq 160$	5
$160 < h \leq 170$	12
$170 < h \leq 180$	8

8 The mean of 8 numbers is 20.

One number, 34, is removed.

Find the new mean.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 2

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1 **4**

2 $75 \div 5$

15

3 **The range uses the extreme values; the IQR ignores the top and bottom quarters.**

4 Total $9 + 6 + 6 = 21$

1.05

5 **Median line at 22**

$40 - 5 = 35$

6 **A scored higher on average (higher median).**

B was more consistent (smaller IQR).

7 $$\frac{155 \times 5 + 165 \times 12 + 175 \times 8}{25}$$

$$= \frac{4155}{25}$$

166.2

8 Total 160

$126 \div 7$

18