GCSE HIGHER · REVISION MAT 4

Comparing and interpreting data

1 Brand A batteries: median life 42 h, IQR 6 h.

Brand B: median 45 h, IQR 18 h.

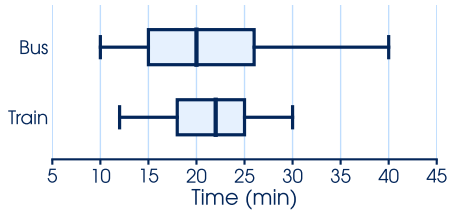
Which brand is more reliable? Explain.

2 Times: 12, 13, 13, 14, 15, 15, 15, 16, 48 s.

Find the median and explain why it is better than the mean here.

3 Explain what it means if two groups have the same median but different IQRs.

4 Compare the journey times.



5 Explain why results from a survey of 30 people in one street may not apply to a whole city.

6 In a sample of 40 apples, 6 were bruised.

Estimate the number of bruised apples in a crate of 600.

7 Explain why a box plot is useful for comparing data sets.

8 Before training: mean 14.2 s, range 3.1 s.

After: mean 13.6 s, range 1.2 s.

Comment on the effect of the training.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 4

Comparing and interpreting data

1 A: less variation, even though B lasts a little longer on average.

2 Median 15 s

The 48 s outlier raises the mean.

3 They are typically the same, but one is more spread out.

4 Bus quicker on average (median 20 vs 22).

Train more consistent (IQR 7 vs 11).

5 The street may not be typical of the city.

6 $\frac{6}{40} \times 600$

90

7 It shows the median, quartiles and range together, so averages and spread can be compared.

8 Faster on average and much more consistent.