

66 Investigation

Change The Score

These scores were give to the speakers  
in a “Speak for Yourself” competition.

16 17 15 12 15 17 19 11 14 14

- 1 Find the mean, median, mode and range of these scores.

Kelly thought they should all have two more points.

- 2 How would this change the mean, median, mode and range?
- 3 What if Kelly had wanted each score halved?
- 4 What if Kelly had wanted each score doubled?
- 5 What if Kelly had wanted each score increased by 25%?
- 6 What effect on the mean, median, mode and range does each of these have?
- i Adding the same to each number in a data set.
  - ii Subtracting the same from each number in a data set.
  - iii Multiplying each number in a data set by the same number.
  - iv Dividing each number in a data set by the same number.
- 7 Test to see if what you decided in question 6 is true for these data sets.

|   |     |     |     |     |     |     |     |     |   |
|---|-----|-----|-----|-----|-----|-----|-----|-----|---|
| a | 5   | 11  | 6   | 8   | 24  | 17  | 12  |     |   |
| b | 1.6 | 1.9 | 1.7 | 2.4 | 2.6 | 2.3 | 1.6 |     |   |
| c | -3  | -5  | -9  | 0   | 5   | 8   | 3   | 2   |   |
| d | 6   | 6   | 6   | 6   | 6   | 6   | 6   | 6   |   |
| e | 31  | 82  | 64  | 27  | 33  | 47  | 62  | 108 | 1 |

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