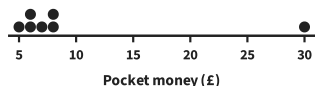


# Choosing the Best Average



1 an outlier pulls the mean

Pocket money for 7 students. Which average describes the group better?



5, 6, 6, 7, 8, 8, 30

Median  Mean

Better: mean median

Why: an outlier no outlier

2 Test scores for 7 students. Which average describes the group better?



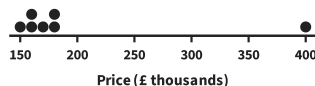
10, 12, 13, 13, 15, 17, 18

Median  Mean

Better: mean median

Why: an outlier no outlier

3 Prices of 7 houses. Which average describes the group better?



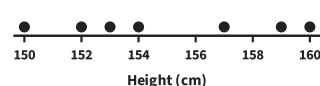
150, 160, 160, 170, 180, 180, 400

Median  Mean

Better: mean median

Why: an outlier no outlier

4 Heights of 7 students. Which average describes the group better?



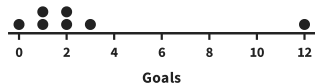
150, 152, 153, 154, 157, 159, 160

Median  Mean

Better: mean median

Why: an outlier no outlier

5 Goals scored by 7 players. Which average describes the group better?



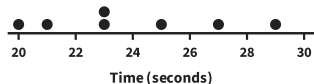
0, 1, 1, 2, 2, 3, 12

Median  Mean

Better: mean median

Why:

6 Times for 7 runners. Which average describes the group better?



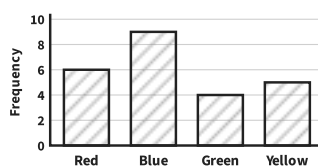
20, 21, 23, 23, 25, 27, 29

Median  Mean

Better: mean median

Why:

7 Notice the change!  
Favourite colours in a class. Which average can describe this group?



mean median mode

It is

The data are numbers words

8 How students travel to school. Which average can describe this group?



mean median mode

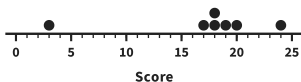
It is

The data are numbers words

## Choosing the Best Average further practice



9 Spelling test scores for 7 students. Which average describes the group better?



Median  Mean

Better

Why

10 A shoe shop sold these sizes yesterday. The manager wants to know which size to order most of. Which average should she use? Find it.  
7, 5, 8, 6, 7, 9, 7, 6, 4

mean median mode

Size

11 Ring the best average to describe each set of data.

- (a) Favourite crisp flavours in a class  
mean median mode
- (b) Pay at a small firm where the owner earns far more than everyone else  
mean median mode
- (c) Heights of the players in a hockey team  
mean median mode

12 The heights of 6 plants, in cm, are 12, 14, 15, 15, 17, 18. A seventh plant, 40 cm tall, is added. Which changes more, the mean or the median? Show your working.

|        | 6 plants | 7 plants |
|--------|----------|----------|
| Mean   |          |          |
| Median |          |          |

Answer

13 Max wants to show his parents that his friends get a lot of pocket money. Their weekly pocket money, in pounds, is 5, 5, 5, 8, 10, 12, 18. Work out all three averages. Which one should Max use?

| Mean | Median | Mode |
|------|--------|------|
|      |        |      |

Answer

14 The times, in minutes, two plumbers took to arrive at their last 5 jobs.  
Plumber A: 20, 25, 30, 35, 140  
Plumber B: 40, 45, 45, 50, 55  
Which plumber usually arrives sooner? Use a suitable average.

Plumber A

Plumber B

Answer

15 The yearly pay, in thousands of pounds, of the 7 people at a small firm is 21, 22, 22, 23, 24, 26, 100. An advert says the average pay is £34 thousand. Which average does the advert use? Is it fair? Explain.

Average

Fair?

16 Jo says the mode is always the best average to use for numbers. Write down five numbers that show she is wrong. Explain.

Example