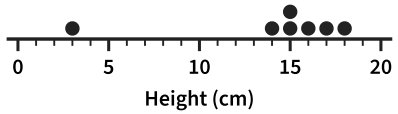
Choosing the Best Average

1 The dot plot shows the heights of 7 seedlings. (a) Write down the outlier. (b) Which describes the heights better, the mean or the median?



(a) _____

(b) _____

2 The numbers of emails 7 people got yesterday are

9, 12, 10, 11, 59, 8, 10

Find the mean and the median. Which describes the data better? Give a reason.

	Mean	Median
Emails		

_____

Answer _____

3 Six runners' times, in seconds, are

15, 13, 14, 16, 12, 14

Which average should you use to describe the times? Find it.

_____

Answer _____

4 Ring the best average to describe each set of data. Set (c) is the colours of 5 cars.

(a) 21, 23, 22, 25, 24	mean	median	mode
(b) 5, 6, 4, 5, 33	mean	median	mode
(c) silver, black, red, silver, white	mean	median	mode

5 Ten students were asked their favourite pet.

dog, cat, fish, dog, rabbit, cat, dog, hamster, dog, cat

Which average can you use for this data? Find it.

_____

Answer _____

6 The table shows the minutes students in two classes spent on homework one night. Write two sentences to compare the classes.

	Mean	Range
Year 7	24	18
Year 8	21	10

Average _____

Range _____

7 Leah and Sam each did 5 quizzes, scored out of 10. Compare their scores. Use the mean and the range.

Leah: 7, 9, 8, 6, 10

Sam: 9, 4, 10, 3, 9

	Mean	Range
Leah		
Sam		

Average _____

Range _____

8 Kofi timed how long two laptops took to start up, in seconds. Ivy says, "Laptop B was more consistent, because its range is bigger." Explain her mistake, then write the correct sentence.

Laptop A: 22, 25, 24, 27, 21

Laptop B: 18, 30, 26, 15, 29

	Range
Laptop A	6
Laptop B	15

Why _____

Correct _____

Choosing the Best Average *further practice*

9

A shop sells hats in sizes 54 to 59. The sizes sold today are

56, 57, 56, 58, 55, 56, 57, 56, 59

(a) Which size should the shop order most of? (b) Why is the mean no use here?

(a) _____

(b) _____

10

Jo and Mia each ran 100 m five times. Their times are in seconds. Compare their times. Use the mean and the range.

Jo: 14.2, 13.8, 14, 14.4, 13.6

Mia: 13.4, 14.6, 13.1, 14.5, 13.4

Average _____

Range _____

	Mean	Range
Jo		
Mia		

11

The minutes two buses were late on 5 days are shown. Use a suitable average and the range to compare the buses.

Bus A: 1, 0, 2, 1, 25

Bus B: 4, 3, 5, 4, 6

Average _____

Range _____

	Average	Range
Bus A		
Bus B		

12

Jade and Ruby each played 5 basketball games. Compare the points they scored. Use the mean and the range.

Jade: 12, 15, 11, 14, 13

Ruby: 8, 20, 10, 18, 9

Average _____

Range _____

	Mean	Range
Jade		
Ruby		

13

The mean and the median of these six numbers are both 10.

8, 9, 10, 10, 11, 12

The number 45 is added. Find the new mean and the new median. Which average describes the data better now?

Answer _____

	Mean	Median
6 numbers	10	10
7 numbers		

14

A quiz team needs one more player who scores steadily. The table shows two players' scores in their last 10 quizzes. Who should the team pick? Explain.

Pick _____

Why _____

	Mean	Range
Priya	18	15
Bea	16	4

15

Ben says, "The mean is always the best average, because it uses every value." Write down five numbers that show he is wrong. Explain.

Example _____

Why _____

16

Write down two sets of four numbers that have the same mean, where the first set is more consistent than the second.

First _____

Second _____