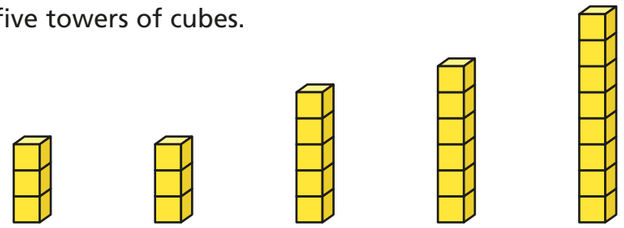
Understand and use the mean, median and mode

1 Here are five towers of cubes.



a) What is the most common number of cubes used in a tower?

Which average is this? Circle your answer.

mode **median** **mean**

b) The towers are in ascending order of height.

How many cubes are in the middle tower?

Which average is this? Circle your answer.

mode **median** **mean**

c) The cubes are redistributed so that the five towers are now all the same height.

How many cubes are in each tower now?

Which average is this? Circle your answer.

mode **median** **mean**

d) Complete the sentences.

The median number of cubes used is ☐

The modal number of cubes used is ☐

The mean number of cubes used is ☐

2 Find the mean of each set of data.

a) 2, 5, 8, 4, 11

b) 0, 3, 9, 2, 2, 11, 15, 32, 7

c) 2, 8, 5, 12, 4

d) 17, 24, 15, 42, 63, 71, 7

3 Find the median of each set of data.

a) 2, 4, 5, 8, 11

b) 2, 5, 8, 4, 11

c) 0, 11, 3, 5, 2, 19

d) 44, 40, 41, 49

e) 17, 9, 35, 3, 0, 42

4 Find the mode of each set of data.

a) 3, 5, 1, 3, 2, 9, 3

b) 17, 11, 9, 9, 17, 6, 9

c) 26.3, 14.1, 15.8, 14.1, 26.3, 19.7, 20.6

d) 0, 1, 2, 3, 4, 5, 6, 7

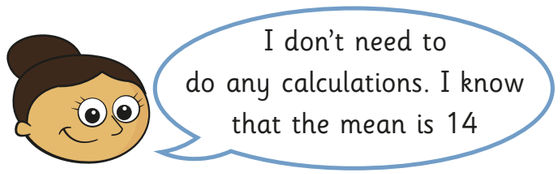
e) red, blue, red, orange, yellow, green, yellow, blue, red, red, white

5 The mean of this set of data is 13

0	4	7	11	21	35

Dora is working out the mean of a different set of data.

1	5	8	12	22	36



Show that Dora is correct.

6 Six numbers have a mode of 19, a mean of 12 and a median of 14

a) Fill in the cards to show what the numbers could be.

b) What is the range of your set of numbers?

Compare your range with a partner's.

7 The mean of this set of data is 10.5

$z + 1$	0	21	13	21	z	7	8

a) Work out the value of z.

$z =$

b) Work out the median, mode and range of the data.

median mode range

c) A ninth card is added.

The mean is now 12

What is the value of the ninth card?

8 Write an expression for the mean of the cards.

$3x$	$5x$	$7x$	$9x$	$2x$	$13x$