



- 1 Here are seven numbers.

3 7 7 4 9 7 2

Write down the mode of these numbers.

(1 mark)

The mode is the value that appears most often

7 appears three times, more than any other number, so the mode is

7

7

- 2 The stem and leaf diagram shows the masses, in grams, of some tomatoes.

Stem	Leaves
2	1 4 6
3	0 2 5 8
4	3 7

Key: 2 | 1 = 21 grams

Find the range of the masses.

(2 marks)

The smallest mass is 21 grams and the largest mass is 47 grams

Range

$$47 - 21 = 26 \text{ grams}$$

26 grams

- 3 Here are five numbers.

3, 5, 8, 9, 12

Write down the median.

(1 mark)

already in order, 5 numbers

middle one is the 3rd

8

- 4 Here are five numbers.

12 5 19 8 3

Work out the range of these numbers.

(1 mark)

Range = highest value minus lowest value

$$19 - 3 = 16$$

16

- 5 Seven children have these ages.

12, 9, 15, 11, 9, 14, 10

Work out the median age.

(2 marks)

Put in order

9, 9, 10, 11, 12, 14, 15

7 values, so the middle is the 4th

11

- 6 A shoe shop wants to know which size to order the most of. Here are the sizes of the shoes sold in one hour.

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

Which average should the shop use: mode, median or mean? Give your answer and work it out.

(2 marks)

most popular = mode

5 appears 2 times

6 appears 4 times

7 appears 2 times

mode = 6

- 7 Here are the scores of six players in a game.

6, 3, 8, 5, 9, 2

Work out the median score.

(2 marks)

Put in order

2, 3, 5, 6, 8, 9

middle two are 5 and 6

$$(5 + 6) \div 2 = 5.5$$

5.5

8

A shoe shop records the sizes of the last eight pairs of trainers it sold.

5 7 6 5 8 5 9 6

a. Write down the modal shoe size.

b. Work out the range of the shoe sizes.

(3 marks)

a) Size 5 appears three times, more than any other size, so the mode is 5

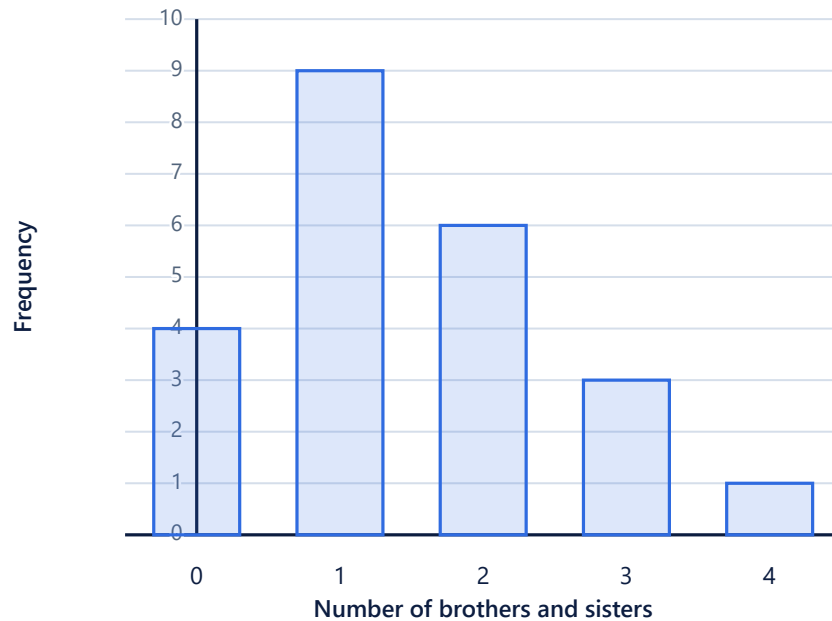
b) Range

$$9 - 5 = 4$$

9

23 pupils were asked how many brothers and sisters they have. The bar chart shows the results.

- Write down the mode.
- Work out the median.
- Write down the range.



(4 marks)

a)

Tallest bar is at 1

1

b)

23 pupils, so the median is the 12th

0s: 4 pupils (1st to 4th)

1s: 9 pupils (5th to 13th)

1

c)

$$4 - 0 = 4$$

4

10

20 pupils were asked how many goals they scored in one match. The table shows the results.

Goals	0	1	2	3	4
Number of pupils	4	6	5	3	2

- Write down the mode.
- Write down the range.
- Work out the median.

(4 marks)

a)

most pupils scored 1 (6 pupils)

1

b)

$$4 - 0 = 4$$

4

c)

20 values: 10th and 11th

running total: 4, 10, 15, ...

10th = 1, 11th = 2

$$(1 + 2) \div 2 = 1.5$$

1.5

- 11 Five friends write down how much money (in £) they have saved.

4, 5, 5, 6, 80

Zainab says, "The mean is the best average to show a typical amount."

- Work out the mean.
- Work out the median.
- Which average is better to show a typical amount? Give a reason.

(4 marks)

a)

$$4 + 5 + 5 + 6 + 80 = 100$$

$$100 \div 5 = 20$$

£20

b)

middle of 4, 5, 5, 6, 80

£5

c)

80 is much bigger than the rest

median is better

- 12 Ten cards each have a number written on them:

2 3 3 5 5 5 7 8 8 9

- Write down the mode of the numbers.
- One card is picked at random. Find the probability that the number on the card is greater than 7. (3 marks)

The number 5 appears three times, more than any other number, so the mode is 5

The numbers greater than 7 are 8, 8 and 9, which is 3 cards out of 10

$$P(\text{greater than 7}) = \frac{3}{10}$$

13

Nine students in Year 7 and nine students in Year 11 ran a race. Here are their times, in seconds.

Year 7: 12 15 15 18 20 21 24 26 28

Year 11: 8 10 13 14 16 19 22 25 27

Compare the times of the Year 7 students with the times of the Year 11 students.

(4 marks)

Year 7 median

the 5th value = 20 seconds. Year 11 median: the 5th value =
16 seconds

Year 7 range

$28 - 12 = 16$ seconds. Year 11 range: $27 - 8 = 19$ seconds

The Year 11 median is lower, so on average the Year 11 students
ran faster

The Year 7 range is smaller, so the Year 7 times were more
consistent

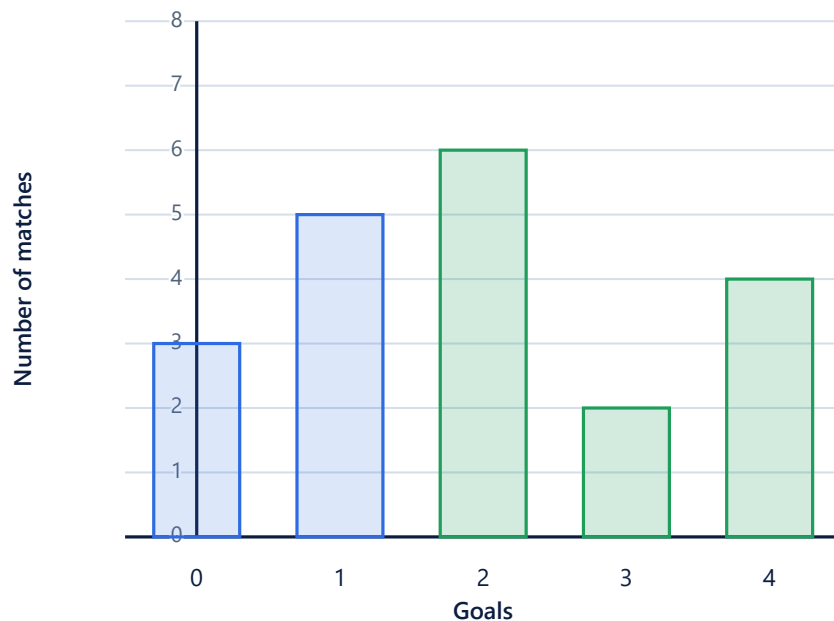
14

Some pupils counted the goals scored in each of 20 matches. The frequency table shows the results.

Goals	0	1	2	3	4
Number of matches	3	5	6	2	4

The bars for 0 goals and 1 goal are already drawn on the chart.

- Complete the bar chart.
- Write down the mode.
- Work out the median.
- Work out the range.



(5 marks)

a)

Draw bars up to 6, 2 and 4

b)

Tallest bar is 2 goals

mode = 2

c)

20 matches: halfway between 10th and 11th

0s and 1s cover the first 8

9th to 14th are all 2

median = 2

d)

$4 - 0 = 4$

range = 4