



FUNCTIONAL SKILLS MATHEMATICS

AQA | Edexcel | City & Guilds | Open Awards | NCFE | Highfield

Level 1

Mean and Range

Materials

- You **cannot** use a calculator for **questions** with this symbol.



Instructions

- Answer **all** questions.
- Answer questions on separate paper.

Information and Advice

- The marks for each question are shown in brackets – use this as a guide on how long to spend on each question.
- Read each question carefully before you answer it.
- Check you answers.



Q1 Here is a list of numbers:

9, 5, 1, 4, 8, 6, 2, 11, 4, 3

1(a) Calculate the mean of the list of numbers.

[2 marks]

1(b) Calculate the range of the list of numbers.

[1 mark]

Q2 Leah and Roma roll two dice and add the scores together.

They record their results in the list below:

11, 2, 6, 7, 9, 7, 8, 4, 12, 10, 5, 3, 7, 8, 6

2(a) Calculate the mean score.

[2 marks]

2(b) Calculate the range of the scores.

[1 mark]

2(c) Is it possible for the range to be any greater than your answer for part (b)? Give a reason for your answer.

[1 mark]

Q3 Manish records the speed (in mph) of cars that pass by his house.

Here are the speeds that he records:

29, 34, 32, 26, 25, 37, 30, 27, 22, 26, 29, 31

3(a) Calculate the mean speed of the cars that pass by Manish's house.

[2 marks]

3(b) Calculate the range of the speed of cars that pass by Manish's house.

[1 mark]

Q4 Theo has grown some pumpkins in his garden.

He makes a list of the pumpkins weight in kg:

8.3, 9.8, 9.1, 11.1, 9.5, 12.5, 10.8, 13.2, 10.2

4(a) Calculate the mean weight of the pumpkins.

[2 marks]

4(b) Calculate the range of the weights of the pumpkins.

[1 mark]

4(c) Theo realises he forgot to include the weight of one of his pumpkins on the list.

The weight of this pumpkin is 12.1 kg.

If this pumpkin was added to the list, state how it would affect the mean and range found in part (a) and part (b).

[2 marks]

Q5 Ruben records the ages of everyone at a party.

Here is a list of the ages (in years):

16, 22, 34, 25, 62, 36, 26, 12, 29, 9, 41, 55, 34, 19

5(a) Calculate the mean age at the party.

[2 marks]

5(b) Calculate the range of the ages.

[1 mark]

5(c) The 9 year old leaves the party with their parent who is 36.

How does this affect your answer to part (b)?

[1 mark]

Q6 Here are the prices of some cars at a car dealership:

£4200, £3650, £5200, £2950, £3900, £2450, £6000

6(a) Calculate the mean price of the cars.

[2 marks]

6(b) Calculate the range of the prices of cars.

[1 mark]

6(c) The car that is priced at £2950 is sold.

If this car is removed from the list, how does this affect your answer to part (a)?

[1 mark]

Q7 Megan is looking at the different amounts of sugar in soft drinks.

She lists the amount of sugar (in grams) per 100 ml in all the popular drinks:

11.1, 8.5, 5.8, 10.6, 10.9, 11, 5.5, 6.1, 7.9

7(a) Calculate the mean sugar per 100 ml for the soft drinks.

[2 marks]

7(b) Calculate the range of the sugar per 100 ml for the soft drinks.

[1 mark]



Q8 Dwight measures the maximum temperature everyday for 10 days.

The range of the temperatures is 9°C.

The lowest temperature he recorded was 13°C.

What was the highest temperature Dwight measured?

[1 mark]

Q9 Imran asks his friends to pick a random number between 1 and 20.

He adds up all the numbers and gets a value of 182.

The mean of the numbers picked by his friends is 13.

How many friends did Imran ask?

[2 marks]