# Collecting and organising data

Year 7 | Key Stage 3 | 12 questions, 37 marks

**KS3 Maths topic practice**

Scan for the solutions

**Name:** _____ **Date:** _____ **Score:** _____ **/ 37**

**1** 20 pupils in a Year 7 class were asked to choose their favourite sport.

F = football, T = tennis, S = swimming, B = basketball, N = netball

F T S F B F T S N B F N T F S B F T N F

a. Copy and complete the tally chart and frequency table.

| Sport | Tally | Frequency |
|---|---|---|
| **Football** | | |
| **Tennis** | | |
| **Swimming** | | |
| **Basketball** | | |
| **Netball** | | |

b. Which sport is the most popular?

c. How many more pupils chose football than tennis?

(3 marks)

Answer _____

**2** The pictogram shows the number of cars washed at a garage on Friday and Saturday.

Key: ● represents 6 cars

Work out how many more cars were washed on Saturday than on Friday.

| | |
|---|---|
| **Friday** | ● ● ● ◐ |
| **Saturday** | ● ● ● ● ● |

**Key:** ● = 6 cars

(2 marks)

Answer _____


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**3** A bar chart shows how the students in class 8R travel to school. The table gives the height of each bar.

| Method | Number of students |
|---|---|
| Walk | 12 |
| Car | 18 |
| Bus | 6 |

a. Write down the number of students who travel by bus.

b. Write down the ratio of the number of students who walk to the number who travel by car. Give your ratio in its simplest form.

(3 marks)

Answer _____


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**4** The table shows the pets owned by some pupils.

| Pet | Dog | Cat | Fish | Rabbit | Other |
|---|---|---|---|---|---|
| **Number of pupils** | 8 | 6 | 3 | 5 | 2 |

On the grid, draw a bar chart to show this information.

(3 marks)

Answer

**5** The pictogram shows the number of books borrowed from a school library on four days.

The row for Wednesday is not finished.

a. How many books were borrowed on Monday?

b. 14 books were borrowed on Wednesday. Complete the pictogram for Wednesday.

c. Work out the total number of books borrowed from Monday to Thursday.

d. How many more books were borrowed on Thursday than on Tuesday?

| | |
|---|---|
| **Monday** | |
| **Tuesday** | |
| **Wednesday** | |
| **Thursday** | |

**Key:** = 4 books

(4 marks)

Answer _____

**6** 150 students travel to school by bus, by car or by walking.

The two-way table shows some information.

| | **Bus** | **Car** | **Walk** | **Total** |
|---|---|---|---|---|
| **Year 7** | 24 | | 30 | 80 |
| **Year 8** | | 18 | | |
| **Total** | 55 | | | 150 |

Complete the two-way table.

(3 marks)

Answer _____


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**7** The two-way table shows the after-school club chosen by each pupil in Year 7.

| | Art | Drama | Sport | Total |
|---|---|---|---|---|
| **Boys** | 12 | 7 | 18 | 37 |
| **Girls** | 15 | 13 | 10 | 38 |
| **Total** | 27 | 20 | 28 | 75 |

a. How many more girls than boys chose Art?

b. How many pupils did not choose Sport?

c. What fraction of the boys chose Sport?

(3 marks)

Answer _____


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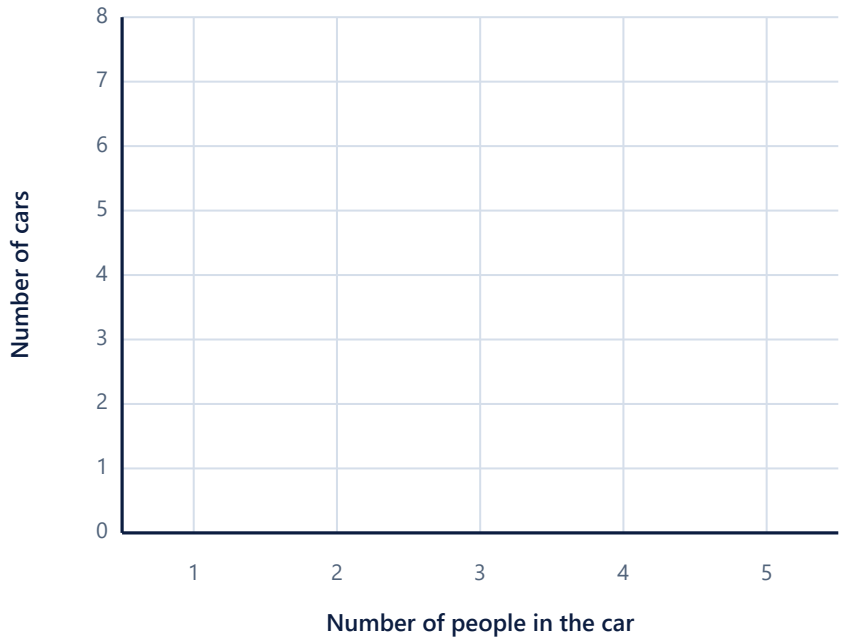
**8** Ruby counted the number of people in each of 20 cars passing her school.

| Number of people | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Number of cars | 7 | 6 | 4 | 2 | 1 |

a. On the grid, draw a vertical line chart for this information.

b. How many cars had more than 2 people in them?

c. Work out the total number of people in the 20 cars.




(4 marks)

Answer _____

**9** Here are the scores of 16 pupils in a test marked out of 40.

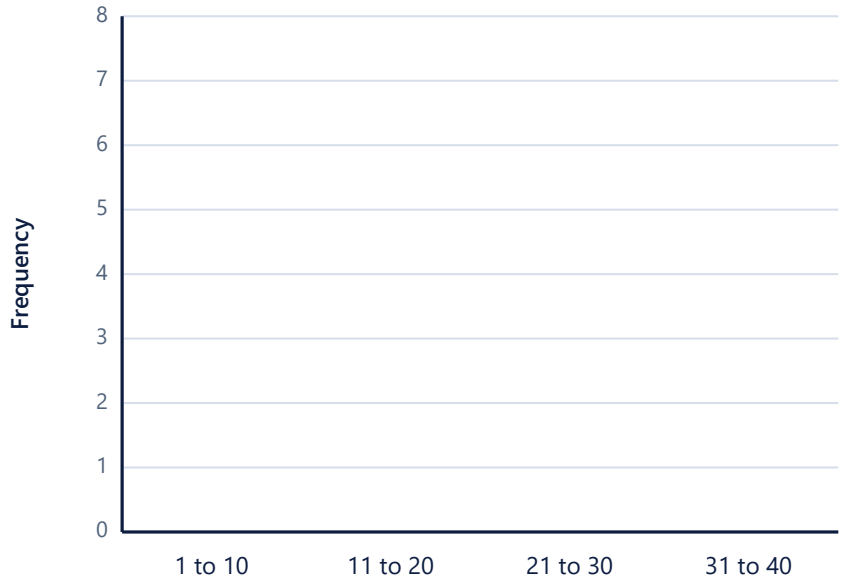
23 35 18 29 31 12 27 38 25 9 33 21 28 16 36 24

a. Copy and complete the grouped frequency table.

| Score | Tally | Frequency |
|---|---|---|
| **1 to 10** | | |
| **11 to 20** | | |
| **21 to 30** | | |
| **31 to 40** | | |

b. Write down the modal class.

c. On the grid, draw a bar chart for your grouped frequency table.




(4 marks)

Answer _____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**10** The time series graph shows the number of ice creams a kiosk sold each month from January to June.

a. Write down the number of ice creams sold in April.

b. Between which two consecutive months was the biggest increase in sales?

(2 marks)

Answer _____

**11** Part of a bus timetable is shown.

| | **Bus A** | **Bus B** | **Bus C** |
|---|---|---|---|
| **Bus station** | 07:40 | 08:05 | 08:35 |
| **Park Road** | 07:52 | 08:17 | 08:47 |
| **Library** | 08:03 | 08:28 | 08:58 |
| **School** | 08:15 | 08:40 | 09:10 |

a. How long does Bus B take to go from the bus station to school?

b. Maya gets on at Park Road. She must be at school by 08:30. Which is the latest bus she can catch?

c. Ollie arrives at the Library stop at 08:10. How long does he have to wait for the next bus?

(3 marks)

Answer _____


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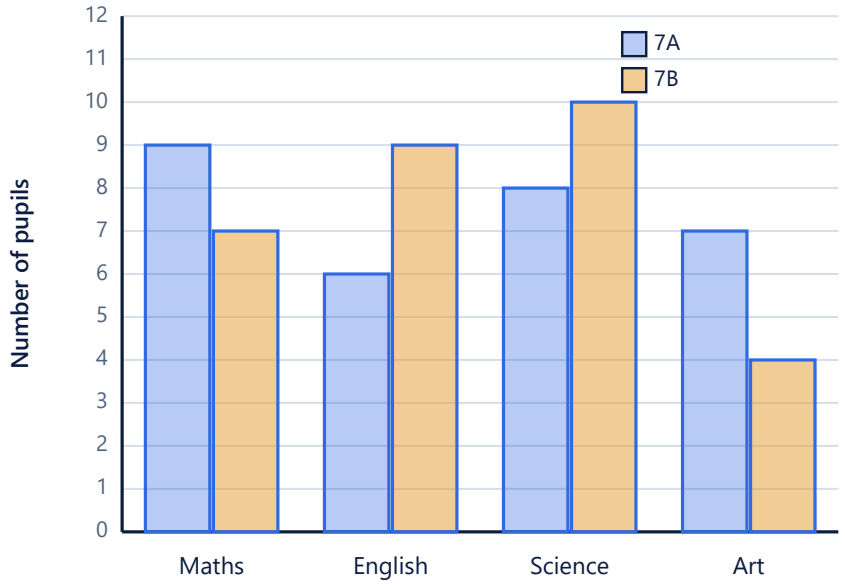
**12** The dual bar chart shows the favourite subject of each pupil in classes 7A and 7B.

a. How many pupils are in class 7A?

b. In which subject did 7B have exactly 2 more pupils than 7A?

c. Which subject was the most popular when the two classes are added together? You must show your working.




(3 marks)

Answer _____

End of questions | Total 37 marks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