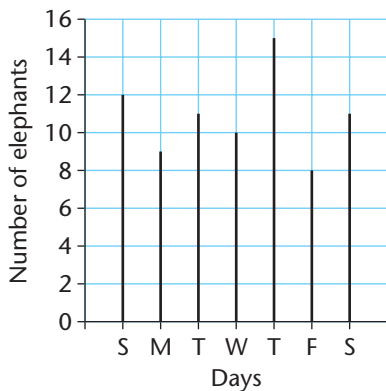


I can draw and interpret bar line charts.

Examples

The number of elephants seen each day at a water hole in a Safari Park.

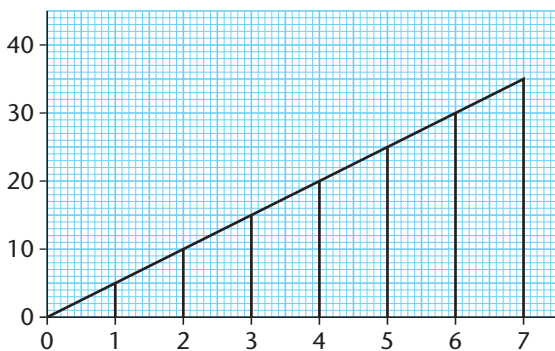


How many elephants were seen at the water hole on Monday?

What was the largest number of elephants seen on any one day?

What number of elephants was the mode?
(The mode is the most common value.)

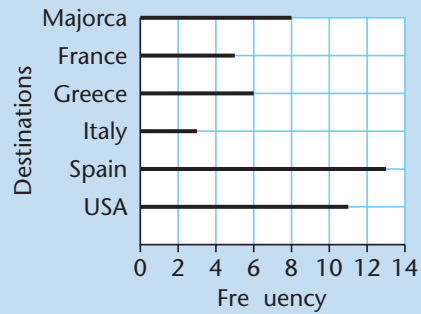
This bar line chart shows the first 7 multiples of 5.



The tops of the bars have been joined to make a line graph showing the start of the 5 times table.

A

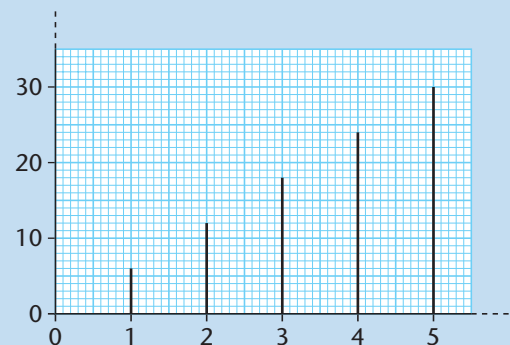
1 This bar line chart shows the destinations of holidays sold by a travel agent.



- How many holidays were sold to the U.S.A.?
- Which was the most popular destination?
- Which was the least popular destination?
- How many more holidays were sold to Majorca than to France?
- How many holidays were sold altogether during the week?

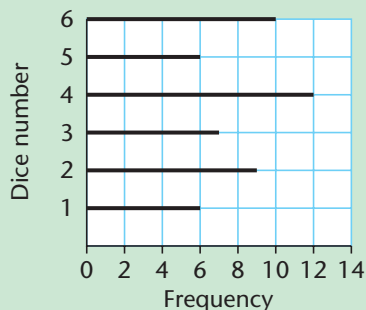


2 Use graph paper.
Copy and complete this bar line chart showing all the multiples of 6 to $10 \times 6 = 60$.



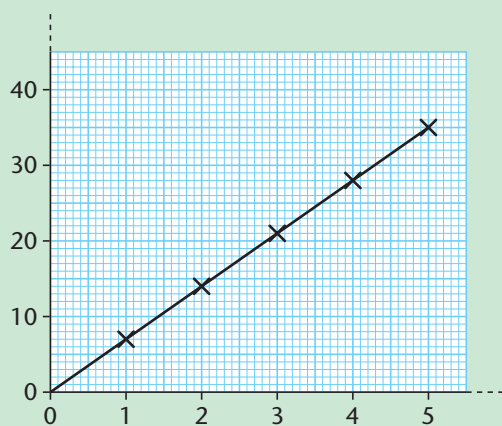
B

- 1 This bar line chart shows how many times each number was thrown when a dice was rolled repeatedly.



- Which dice score was the mode?
- How many times was 2 rolled?
- How many more times was 6 rolled than 1?
- How many times was a number less than 3 rolled?
- How many times was an even number rolled?
- How many times was the dice rolled altogether?

- 2 Use graph paper. Copy and complete this line graph showing the 7 times table for all numbers to 12×7 .

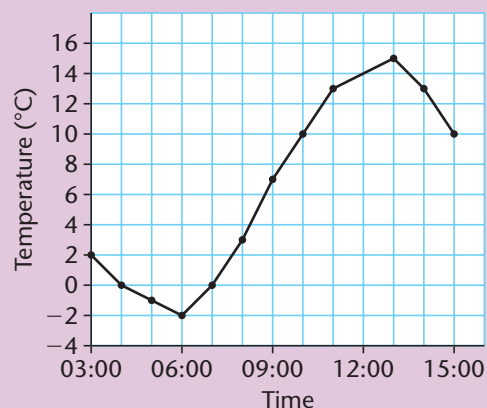


Use your graph to work out what is approximately:

- 11.4×7
- 3.7×7
- $60 \div 7$
- $40 \div 7$

C

- 1 This line graph shows the outdoor temperature recorded hourly between 3 am and 3 pm on February 12th.



- At what time was the temperature 5°C ?
- What was the temperature at 11:00?
- What was the highest temperature recorded?
- What was the lowest temperature?
- For how long was the temperature above 10°C ?
- For how long was the temperature below 0°C ?

- 2 Roll two dice. Add the scores to give a total. Repeat this 50 times keeping a tally of the total scores. Draw a bar line chart to show the results. What was the range of scores? Which dice score was the mode? Did this surprise you?



I can use the language of probability and place events on a probability scale.

The probability of something happening is the likelihood or chance that it might happen.

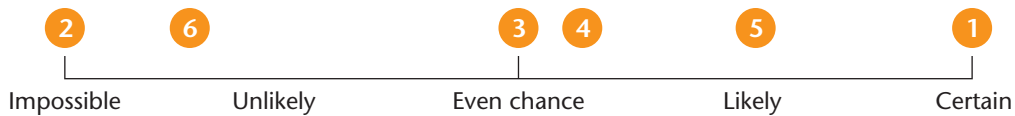
Examples

What is the probability of these events?

- 1 The sun will rise tomorrow.
- 2 You will live to be 500.
- 3 You spin a coin and get a head.
- 4 It will rain tomorrow.
- 5 You will see a bus on your way home.
- 6 You will see an ambulance on your way home.



The probabilities of these events can be placed on a scale. You might choose to place them in these positions. Numbers 1 to 3 could not be put anywhere else but the last three statements depend upon the circumstances.



A

For each of these statements write one of these probabilities.

certain likely even chance unlikely impossible

- 1 You will get married next week.
- 2 You will watch television this evening.
- 3 The next match a football team play will be a home game.
- 4 Your teacher will win the Lottery and retire to the Bahamas.



- 5 You will have a birthday in the next year.
- 6 You roll a dice and get a 6.
- 7 The phone will ring this evening.
- 8 You will have a new pair of shoes in the next three months
- 9 You will learn to juggle in the next year.
- 10 It will snow next week.

B

Place the probability of these events on a scale like the one on the previous page.

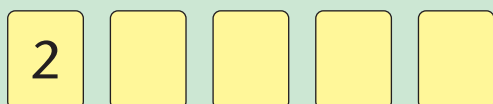
- 1 You will get married when you grow up.
- 2 The Queen was born on a Thursday.
- 3 Someone in the family will receive a letter tomorrow.
- 4 You will pass your driving test next year.
- 5 You roll a dice and get an even number.
- 6 The next person to come into the classroom will be the Headteacher.
- 7 A baby will be born somewhere in the world today.
- 8 Everyone in the class will watch television next week.
- 9 Your television set will need to be repaired in the next five years.
- 10 A teacher at your school will have a Number 1 hit record.



- 11 The above cards are shuffled and then placed face down on a table. What is the probability of one card being turned over and it is:

a) 5	d) even
b) 6	e) under 3
c) odd	f) 3 or over 3?

- 12 One card is turned over.

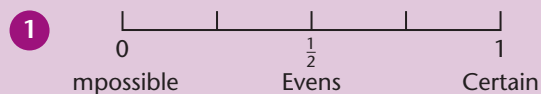


What is the probability that the next card turned over will be:

- | | |
|---------|--------------------|
| a) odd | d) 3 |
| b) even | e) less than 3 |
| c) 2 | f) greater than 3? |

C

Work out these probabilities as a fraction and place each letter on the scale shown.



Spinning a coin and getting:

- a) a head
- b) a head or a tail
- c) neither a head or a tail
- d) a tail.

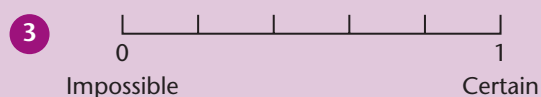
Spinning two coins and:

- e) getting 2 heads
- f) not getting 2 heads
- g) getting one head and one tail
- h) not getting one head and one tail.



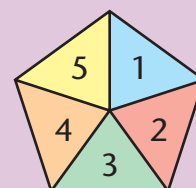
Rolling a 1 to 6 dice and getting:

- a) an odd number
- b) below 6
- c) above 6
- d) a 3
- e) above 3
- f) below 3



Using this spinner and getting:

- a) a 1
- b) below 1
- c) above 1
- d) an even number
- e) an odd number
- d) a 6
- e) below 6.



I can use data to test a hypothesis.

The children on Yellow Table investigated the amount of water they drank in one school day.

They worked out the amount of water in each child's average drink and then recorded the number of drinks they took each day for a week.

The table shows their results.

Name	Average drink	Number of drinks				
		M	Tu	W	Th	F
Adele	100 ml	4	8	7	5	6
Hugh	50 ml	12	15	9	8	11
Poppy	75 ml	4	6	8	5	7
Ryan	60 ml	5	7	9	6	8
Sanya	125 ml	2	3	5	4	6
Waqar	75 ml	9	10	7	11	8

A

Look at the table.

- 1 What is Poppy's average drink?
- 2 Who had most drinks on Thursday?
- 3 How much did Adele drink on Monday?
Give your answer in millilitres.
- 4 Before the data was collected Hugh said *I drink more than half a litre every day.*
Was he right?
Explain your answer.
- 5 Ryan said *I drink less than half a litre every day.*
Was he right?
Explain your answer.
- 6 Draw a bar chart to show each child's average drink.

B

Look at the table.

- 1 On which day did:
 - a) Poppy drink 375 ml
 - b) Sanya drink 375 ml?
- 2 Which two children drank half a litre on Thursday?
- 3 On which day did the children have fewest drinks?
- 4 Who drank the most water on Wednesday?
- 5 Before the data was collected Sanya said *We drink more on hotter days.*
Tuesday was the hottest day. Friday was the coldest. Does the data support her idea?
Explain your answer.
- 6 Draw a bar line chart to show the total number of drinks for each child during the week.

C

Look at the table.

- 1 Which two children drank the same amount on Monday?
- 2 How much more did Sanya drink than Waqar on Wednesday?
- 3 In litres how much did:
 - a) Adele drink in the week
 - b) Hugh drink in the week?
- 4 Before the data was collected Adele said *We all drink no less than 300 ml and no more than 800 ml every day.*
Explain why her theory is not supported by the data.
- 5 Who drank the most during the week?
- 6 Draw a bar line chart to show how much Waqar drank each day.