MONTHS OF THE YEAR

JANUARY

MON	TUE	WED	THU	FRI	SAT	SUN
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

MUM'S BIRTHDAY

FEBRUARY

MON	TUE	WED	THU	FRI	SAT	SUN
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

VALENTINE'S DAY
14 FEBRUARY

MARCH

MON	TUE	WED	THU	FRI	SAT	SUN
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

CHEN'S BIRTHDAY

APRIL

MON	TUE	WED	THU	FRI	SAT	SUN
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

APRIL FOOL'S DAY

MAY

MON	TUE	WED	THU	FRI	SAT	SUN
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

LONG WEEKEND AWAY

JUNE

MON	TUE	WED	THU	FRI	SAT	SUN
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

DAD'S BIRTHDAY

JULY

MON	TUE	WED	THU	FRI	SAT	SUN
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

FAMILY TRIP TO ITALY

AUGUST

MON	TUE	WED	THU	FRI	SAT	SUN
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

SARAH'S BIRTHDAY

SEPTEMBER

MON	TUE	WED	THU	FRI	SAT	SUN
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

TRIP TO AMUSEMENT PARK

OCTOBER

MON	TUE	WED	THU	FRI	SAT	SUN
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

HALLOWEEN 31 OCTOBER

NOVEMBER

MON	TUE	WED	THU	FRI	SAT	SUN
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

KEVIN'S BIRTHDAY

DECEMBER

MON	TUE	WED	THU	FRI	SAT	SUN
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

FAMILY WEDDING

Card 7

1. What month comes **before** April?
   (a) May
   (b) March
   (c) June

2. What month comes **after** July?
   (a) August
   (b) January
   (c) June

3. What month comes **before** November?
   (a) October
   (b) April
   (c) December

4. What month comes **after** February?
   (a) January
   (b) June
   (c) March

5. In which month is Halloween?

6. In which month is Chen's birthday?

7. The long weekend away is in .....

8. What is the missing month?
   There are birthdays in January, March, June, ... and November.

9. Who has a birthday in January?
   (a) Dad
   (b) Sarah
   (c) Mum

10. What month comes **before** January?
    (a) August
    (b) December
    (c) February

ADDitional Activity

- Write the months of the year in the correct order.
- Can you spell them correctly? Some of them are very hard to spell!

Card 7

Answers

1. (b) March
2. (a) August
3. (a) October
4. (c) March
5. October
6. March
7. May
8. August
9. (c) Mum
10. (b) December

MONSTER FOOTPRINTS

Cover the footprints with counters so there are no gaps. Count the counters to find the area of each footprint. Write the name of the monster and the number of counters used for each footprint area. Use this information to answer the questions.

DANZY

TOPPY

FURLY

SLIMY

BARGLE

SQUAB

Card 4

1. Which monster has the largest footprint area?
2. Whose footprint has the smallest area?
3. **Larger** or **smaller**? The area of Furly's footprint is ..... than the area of Bargle's footprint.
4. Whose footprint is smaller than Toppy's?
   (a) Squab's
   (b) Slimy's
5. Which monster has a larger footprint area than Furly?
   (a) Squab
   (b) Slimy
6. **True** or **False**? Danzy's footprint is larger than Squab's.
7. **Less than** or **more than**? The area covered by Toppy's footprint is ..... the area covered by Slimy's footprint.
8. **Smaller** or **larger**? Bargle's footprint area is ..... than Slimy's footprint area.
9. Whose footprint covers the larger area?
   (a) Danzy
   (b) Toppy
10. Whose footprint covers the smaller area?
    (a) Furly
    (b) Danzy
11. Which footprints are correctly ordered from smallest area to largest area?
    (a) Slimy, Bargle, Furly
    (b) Squab, Furly, Slimy
    (c) Danzy, Slimy, Toppy
12. If all of the footprints were placed in order from smallest to largest area, which one is correct?
    (a) Squab, Toppy, Furly, Danzy, Bargle, Slimy
    (b) Slimy, Bargle, Danzy, Toppy, Furly, Squab
    (c) Slimy, Toppy, Bargle, Danzy, Squab, Furly

ADDitional activity

Create crazy footprints with modelling clay and arrange them in order from smallest area to largest area.

Card 4

Answers

1. Squab
2. Slimy
3. larger
4. (b) Slimy's
5. (a) Squab
6. False
7. more than
8. larger
9. (b) Toppy
10. (b) Danzy
11. (a) Slimy, Bargle, Furly
12. (b) Slimy, Bargle, Danzy, Toppy, Furly, Squab

GETTING FROM HERE TO THERE!

Roger Roadsworthy is a man on a mission! He has entered the **Getting from Here to There!** competition to see who can travel to different places on the most forms of transport over two weeks. Roger thinks he has a good chance of winning. The prize is a trip for two to a mystery destination, with one week's accommodation, all expenses paid!

Follow Roger's travels on his mission to win the prize! Solve the problems along the way. Use mental or written methods.

1 First, Roger flew in a helicopter. The pilot made stops at a waterfall after 75 km, a cliff after a further 48 km and finally a desert after another 52 km so Roger could take photographs. How many kilometres did they fly altogether?

2 In the desert, Roger took a camel ride across the sand dunes and back. The trip was 979 m. After travelling for 855 m he stopped to look at the view. How much further did he still have to travel?

3 Roger's next trip was in a yacht. He sailed from the harbour to a tiny island 255 m away. He sailed around the island for another 273 m. Then he sailed back to the harbour, which was the same distance as it was to the island. How many metres did he sail in total?

4 Nearby was a jet ski hire company. Roger hired a jet ski and revved it around a circuit that was 220 metres long. He did this four times.
How many metres did Roger travel on the jet ski altogether?

5 Roger's next trip was on a plane to Bali. He watched two films for 190 minutes in total, slept for 45 minutes and read a book on his e-reader for 36 minutes, before landing.
How many minutes did the flight take?

Card 9

6 In Bali, Roger pedalled around in a rickshaw. He was taken 284 metres to a temple, 692 metres further on to a market, and then walked all the way back to his hotel. How far did he travel by rickshaw?

7 Roger was a passenger in a truck. They travelled north for 326 km. After a delivery and rest stop, they drove 284 km west. The next day they travelled south-east for 380 km, back to where they began.

How far did they travel in total?

8 His next journey was in a hot-air balloon, where it drifted for 844 m before landing. A light fog surrounded the balloon for the first 274 m. The rest was clear sky. For how many metres was there a clear sky?

9 A chairlift took Roger 380 m to the top of the ski slopes. He skied down a gentle slope for 450 m. How many metres did he travel over or on snow?

10 Roger's next trip was in a side-car on a motorbike. They travelled 138 km on flat, straight roads and 70 km on steep, winding roads. How many kilometres did they travel altogether?

11 His next trip was on a golf buggy. The 18-hole course was 599 m long. After four holes, Roger had covered 120 m. How many more metres were there to the end of the 18th hole?

12 Finally, Roger caught a bus 150 m up one street, 278 m along another and 374 m along a third to the competition office. Here he dropped off his photographs and documents to prove his transport choices and travels. How many metres did the bus travel in total?

ADDITIONAL ACTIVITY

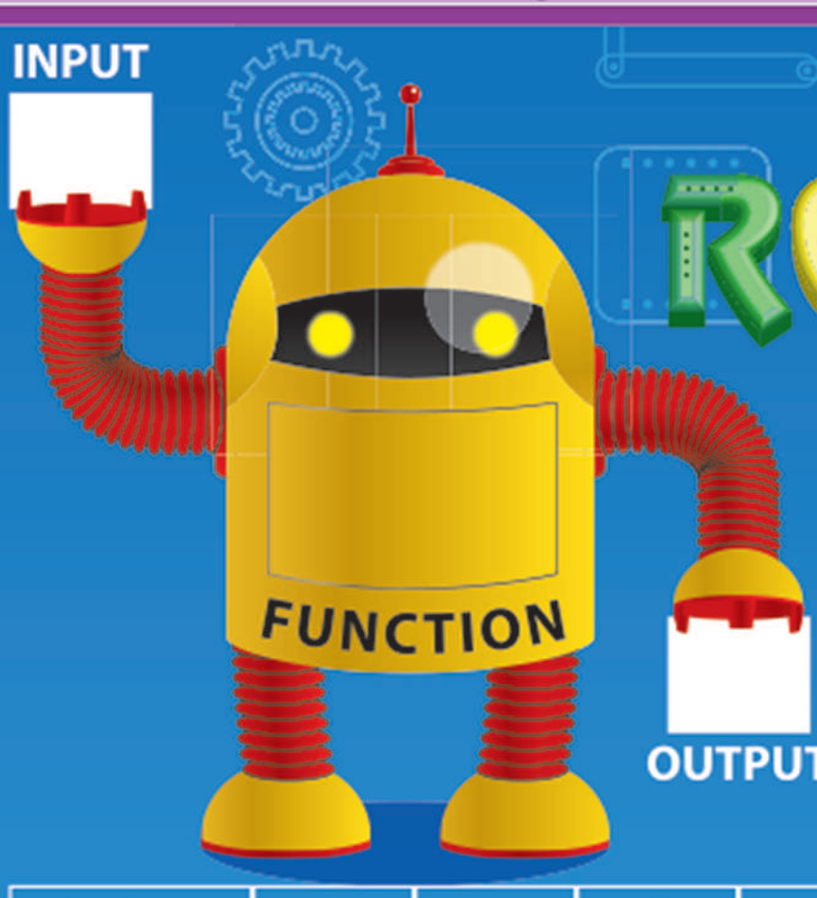
- Make up another form of transport Roger could have used. Write an addition or subtraction word problem about it and give it to a friend to solve.

Card 9

Answers

GETTING FROM HERE TO THERE!

1. 175 km
2. 124 m
3. 783 m
4. 880 m
5. 271 minutes
6. 976 m
7. 990 km
8. 570 m
9. 830 m
10. 208 km
11. 479 m
12. 802 m



ROBOT RULES

Position	1	2	3	4	5	6	7
Pattern	9	18	27		45	54	63

1 The missing number in the table showing the robot machine's input and output is:

(a) 34

(b) 35

(c) 36

2 **True** or **False**?

The function of the robot machine is to make a pattern by multiplying each position number by 4.

3 The next two numbers in the robot machine's pattern are:

(a) 72 and 80

(b) 72 and 81

(c) 70 and 81

4 This robot machine makes a pattern that is:

(a) going up

(b) going down

5 Is the pattern the robot machine makes a repeating pattern?

(a) yes

(b) no

6 **True** or **False**?

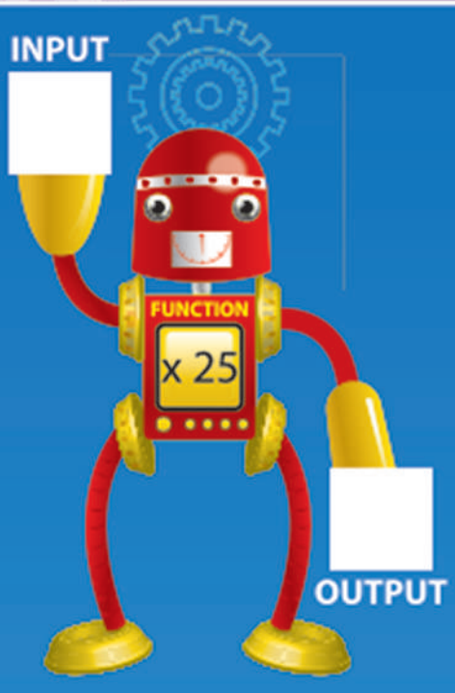
There are two separate rules for the robot machine. Either:

- add 9 to each pattern number

or

- multiply each position by 9

Card 6



7 **True** or **False**?

The function of the robot machine above is the same as the first robot machine.

8 The input and output of this robot machine are:

(a) 7 goes in and 175 comes out

(b) 175 goes in and 7 comes out

9 What is the next position and pattern in the table?

Position	4	5	6	7	8
Pattern	100	125	150	175	200

(a) 9 and 250

(b) 10 and 250

(c) 9 and 225

10 What is the output in the table?

Input	Function	Output
49	Divide by 7	

11 The input in the table is:

Input	Function	Output
	Add 1000	7000

12 What is the function in the table?

Input	Function	Output
54		9

(a) Multiply by 6

(b) Divide by 6

13 The missing number in the addition pattern is:

4, 6, 9, 13, 18, ..., 31, 39

(a) 20

(b) 24

(c) 25

14 Which number is missing in the addition pattern?

62, 68, 76, 82, 90, 96, ..., 110, 118

(a) 102

(b) 106

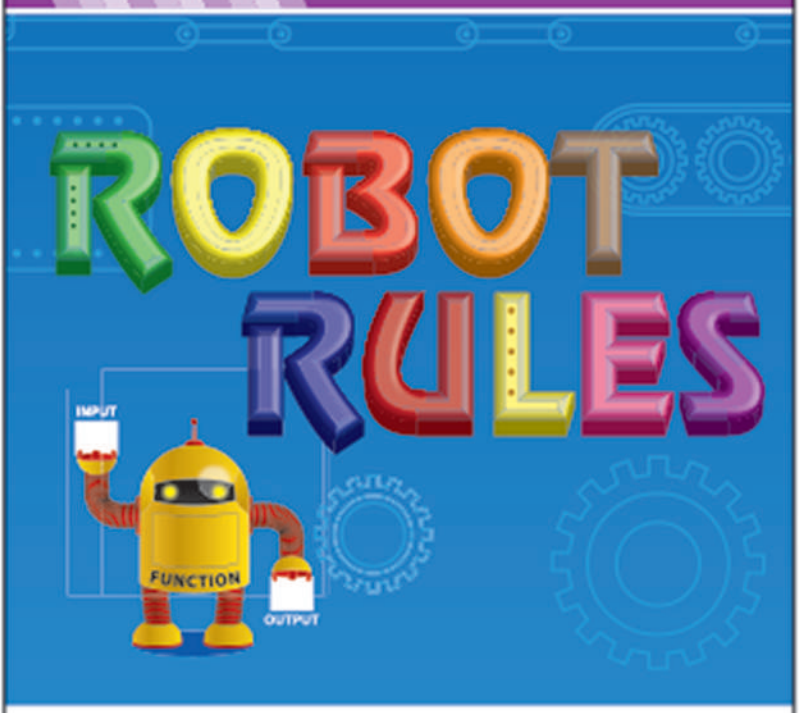
(c) 104

ADDitional Activity

- Create your own input-function-output robot.
- Think of a rule for its function and write it on your robot.
- Draw a table showing the results of different inputs and outputs for your robot.

Card 6

Answers



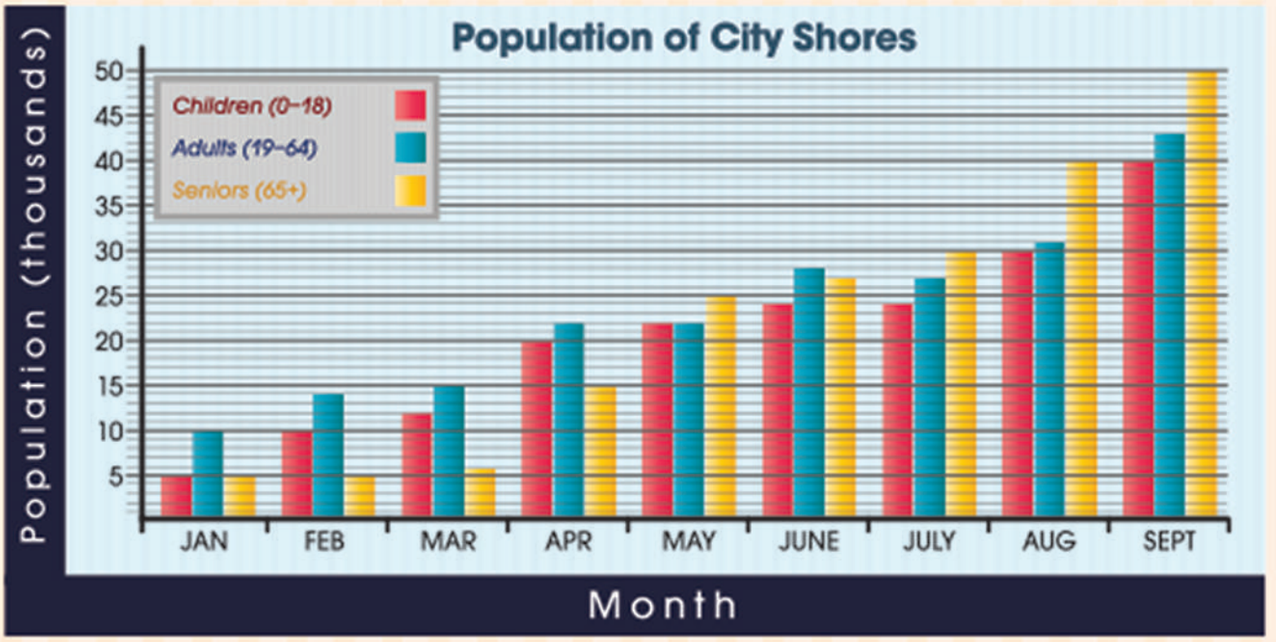
1. (c) 36
2. False
3. (b) 72 and 81
4. (a) going up
5. (a) yes
6. True
7. False
8. (a) 7 goes in and 175 comes out
9. (c) 9 and 225
10. 7
11. 6000
12. (b) Divide by 6
13. (b) 24
14. (c) 104

Town Planning Data

City Shores is a new town the council has built. The population changes from month to month.

Data is used to decide many of the features of the town, such as the number of schools or supermarkets required.

Data A



1. Using Data A, how many adults lived in City Shores in March?

$\frac{3}{4}$ of the population of children at any given time is of school age.

2. How many children attended school in June?

3. If a school has a maximum of 1000 children, how many schools should be open by September?

Data B

Survey of favourite recreational activity	
Tennis	𝍸 ||
Bicycle riding	𝍸 𝍸 |||
Jogging/Walking	𝍸 𝍸 𝍸 |
Swimming	𝍸 |||
Football	|||
Watching TV/films	𝍸 𝍸 𝍸 𝍸 ||
Bowling	||
Shopping	𝍸 𝍸 𝍸 ||||

4. What does Data B show?
   (a) Most children play football.
   (b) Watching TV/films is the most popular recreational activity among the surveyed residents.
   (c) Football is the least popular recreational activity among the surveyed residents.

5. Based on Data B, which of the following should be built?
   (a) bowling club (b) cinema (c) tennis court

Card 7

6 **True** or **False**?

Data B surveyed 90 people, 50 of whom were adults, 20 were children and 20 were seniors.

7 **Yes** or **No**?

Would jogging and walking paths be of any interest to the residents of City Shores?

Data C

Data D

8 The shopping centre is being expanded. Based on Data ....., adding clothes shops would be a good idea.

9 Which set of data would assist the manager of a supermarket to know which type of stock to order?

(a) Data B (b) Data C (c) Data D

10 Which would do better business in City Shores—a travel agency or a car showroom?

11 Which set of data can be used to compare how many more adults are moving to City Shores each month?

12 Which shop would be the most popular with the residents?

(a) electronics

(b) jewellery

(c) home appliances

13 **True** or **False**?

A regular resident of City Shores spends most of their money on haircare at the supermarket.

14 **Yes** or **No**?

Based on September's population figures for seniors, should the council consider building a retirement village?

ADDitional Activities

- Look at the Australian Bureau of Statistics website <http://tinyurl.com/ovnaryd> and work out what graph to use when.
- Complete the 'Eye colour' activity at <http://tinyurl.com/ozhwycp>

Answers

Town Planning Data

1. 15 000
2. 18 000
3. 30
4. (b) Watching TV/films is the most popular recreational activity among the surveyed residents.
5. (b) cinema
6. False
7. Yes
8. C
9. (c) Data D
10. travel agency
11. Data A
12. (a) electronics
13. False
14. Yes

Card 1

Number

Our Solar System

Our solar system has eight planets.

The tables below show the diameters of the eight planets.

Planet	Diameter
Mercury	4879 km
Venus	12 104 km
Earth	12 756 km
Mars	6792 km

Planet	Diameter
Jupiter	142 984 km
Saturn	120 536 km
Uranus	51 118 km
Neptune	49 528 km

1. **True** or **False**?
   Mercury has the smallest diameter.
2. **True** or **False**?
   Saturn has the largest diameter.
3. **True** or **False**?
   Diameter of Mars > Diameter of Venus
4. **True** or **False**?
   Diameter of Jupiter < Diameter of Neptune
5. The two planets with diameters less than 10 000 km are ___ and ___.
6. The two planets with diameters between 10 000 and 20 000 km are ___ and ___.
7. Which two planets have diameters of approximately 50 000 km?
8. Which two planets have diameters greater than 100 000 km?

Card 1

Mars and Venus are Earth's neighbours. Here is some information about these planets.

Mars

Mars is 227 940 000 km from the sun, which is further away than Earth is. One year is equivalent to 686.98 Earth days. Mars has the tallest mountain in our solar system, at 25 km high. It also has the largest canyon, at 3000 km long.

Venus

Venus is 108 000 000 km from the sun, which is nearer than Earth is. At 38 000 000 km away, it is Earth's nearest neighbour. One year is equivalent to 225 Earth days. Its diameter is slightly smaller than Earth's, as there is only a 652 km difference.

Which number from the text has ...

9 2 hundreds?
(a) 25 (b) 225 (c) 652

10 9 hundred thousands?

11 3 thousands?

12 9 tenths?

13 8 hundredths?

14 4 ten thousands?

Which numbers from the text have ...

15 5 units?
_____ and _____

16 6 hundreds?
_____ and _____

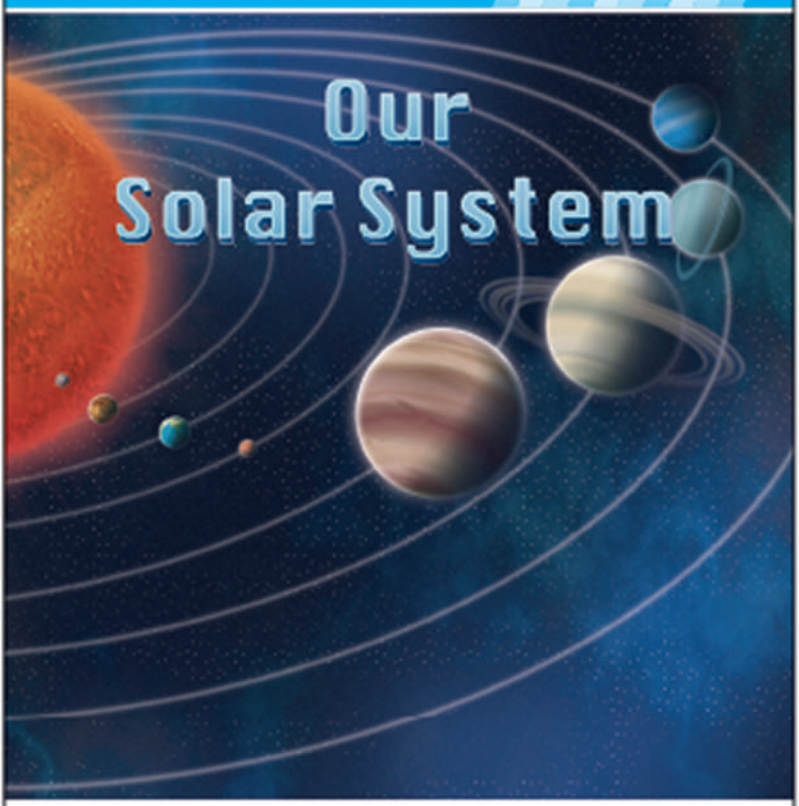
ADDitional Activity

Write the following numbers in words:

- Venus is 38 000 000 km from Earth.
- Earth has a diameter of 12 756 km.
- One year on Mars is equivalent to 686.98 Earth days.
- The temperature on Mars can be as cold as –153 °C.

Card 1

Answers



1	True
2	False
3	False
4	False
5	Mercury and Mars
6	Venus and Earth
7	Uranus and Neptune
8	Jupiter and Saturn
9	(b) 225
10	227 940 000
11	3000
12	686.98
13	686.98
14	227 940 000
15	25 and 225
16	686.98 and 652