

What does it all mean?

Activity 1

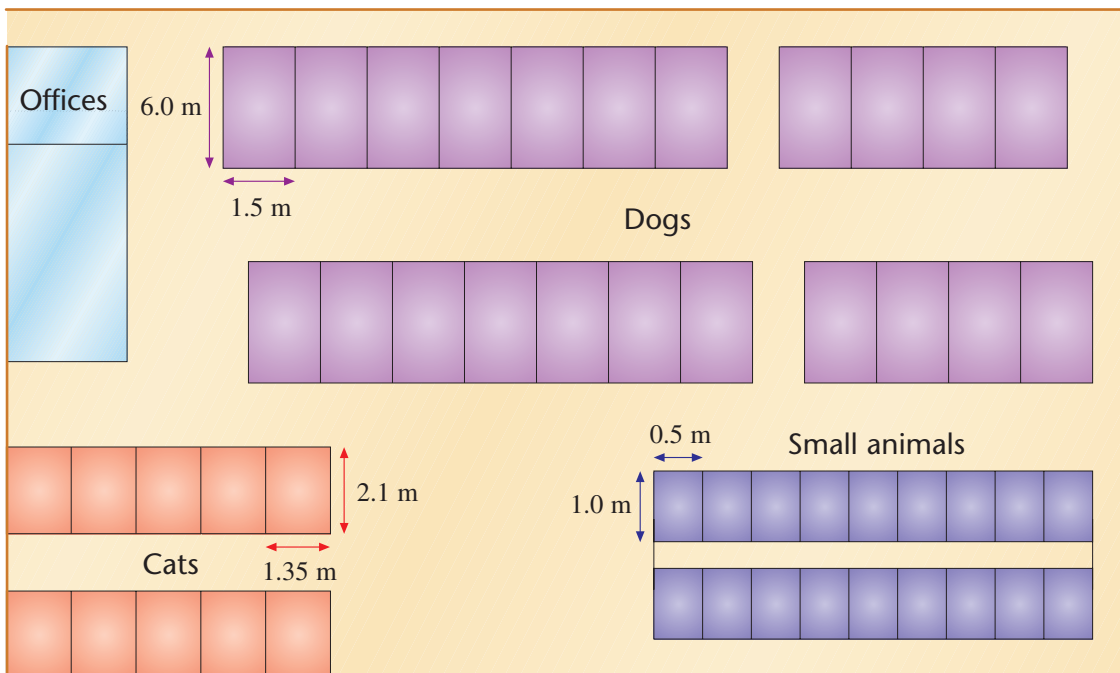
We have a plan of the animal shelter to help people find their way around. Each animal has its own space. We make sure our animals have plenty of room.

Remember

You need **all** this information to help you make sense of a plan.

- **A title** – this tells you what the plan is for.
- **Labels** – these tell you what the different parts on the plan mean.
- **Measurements** – these show the lengths of parts on the plan.

Plan of part of the animal shelter (not drawn to scale)



Each small animal has a space that is 0.5 m wide and 1.0 m deep.

- 1 How much space does a dog have? m wide and m deep
- 2 How much space does a cat have? m wide and m deep

There are 18 cages for small animals.

- 3 Which type of animal has most cages?
- 4 Which animal has fewest cages?

Activity 2

People have to pay to take pets home from the animal shelter. This is called 're-homing'. The people are called 're-homers'. We also charge to look after pets while their owners are away. This is called 'boarding'. This gives us enough money to run the shelter.

Here is a list of our charges.

THE SANCTUARY ANIMAL SHELTER		
CHARGES		
RE-HOMING		BOARDING
£80.00	Dogs	£7.50 per day
£50.00	Cats	£3.00 per day
£25.00	Rabbits	£2.00 per day
Up to £10.00	Various small pets	£2.00–£2.50 per week

To find out how much it costs to take home a cat, look for 'cats', then look across to the left in the 're-homing' column. You will see £50.00. This is the amount you pay to re-home a cat.

'Various small pets' includes animals such as gerbils, mice, budgies and other birds.

- 1 What is the cost of re-homing a dog?
- 2 What is the cost per day for boarding a rabbit?
- 3 What is the cost of re-homing a rabbit?
- 4 How much does it cost to board a cat for
 - a one day?
 - b two days?
 - c a week?
- 5 What is the maximum price to re-home a mouse? .
.....
- 6 What is the cost of boarding a gerbil for a week?
 - a maximum cost =
 - b minimum cost =



Activity 3

At the animal shelter, we divide the dogs into two types: pedigrees and crossbreeds. Most of the dogs in the shelter are crossbreeds but there are always a few pedigree dogs. The dogs are of different sizes: small, medium and large. We use a table to show people how many dogs we have, in which sizes and of which type.

Types and sizes of dogs in the animal shelter – June 2002

Type of dog	Size of dog		
	Small	Medium	Large
Pedigree	1	2	6
Crossbreed	7	11	13

Remember

Making sense of tables

- Tables are made up of **rows** and **columns**. Rows are horizontal. Columns are vertical. You need all this information to help you to make sense of a table.
- **A title** – this tells you what the table is about.
- **Row heading** – this tells you what is in the row.
- **Column heading** – this tells you what is in the column.

To find out how many medium-sized pedigree dogs we have, I find the heading 'Pedigree' in the first column ... look along the top row until I see 'Medium'... and I see that we have two medium-sized pedigree dogs.



Look at all the parts of the table – the title, the rows and the columns – to answer these questions.

- 1 When was the information gathered?
 - 2 How many large pedigree dogs do we have?
 - 3 How many medium-sized crossbreed dogs do we have?
 - 4 How many small pedigree dogs do we have?
- How many small dogs are there altogether?
Look down the column headed 'small'. There is one pedigree dog and seven crossbreed dogs, so there are eight small dogs altogether.
- 5 How many large dogs are there in the shelter altogether?
 - 6 How many crossbreed dogs do we have?
 - 7 How many dogs do we have in the shelter altogether?

Review

Do you need more practice in reading plans, lists and tables?

Yes No

For more work on this, go to H1 and H2 (page 12).

How many dogs?

Activity 4

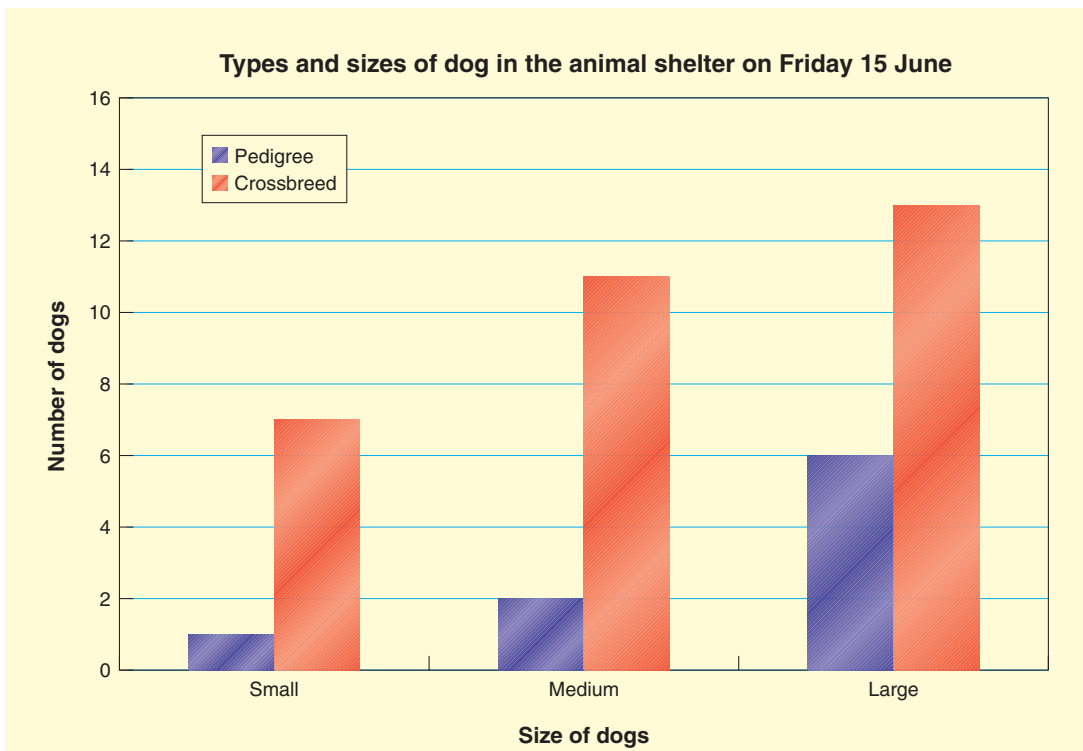
I use bar charts to show information. The vertical axis shows the number of dogs.

Remember

Making sense of bar charts.

- Read the **title** to find out what the bar chart is about.
- The **horizontal axis** is the line going along the bottom. There is a name under each bar. There is a label telling you what the bars represent.
- The **vertical axis** is the line going up the left-hand side. It has numbers at equal intervals. There is a label telling you what the numbers represent. Make sure you look closely at the numbers on the vertical axis.
- Look at the **labels** on the **axes**.
- There is a **key** telling you what the colours mean.

Look at the **blue bar** for medium dogs. It is for pedigrees.



The horizontal axis shows the sizes and types of dog.

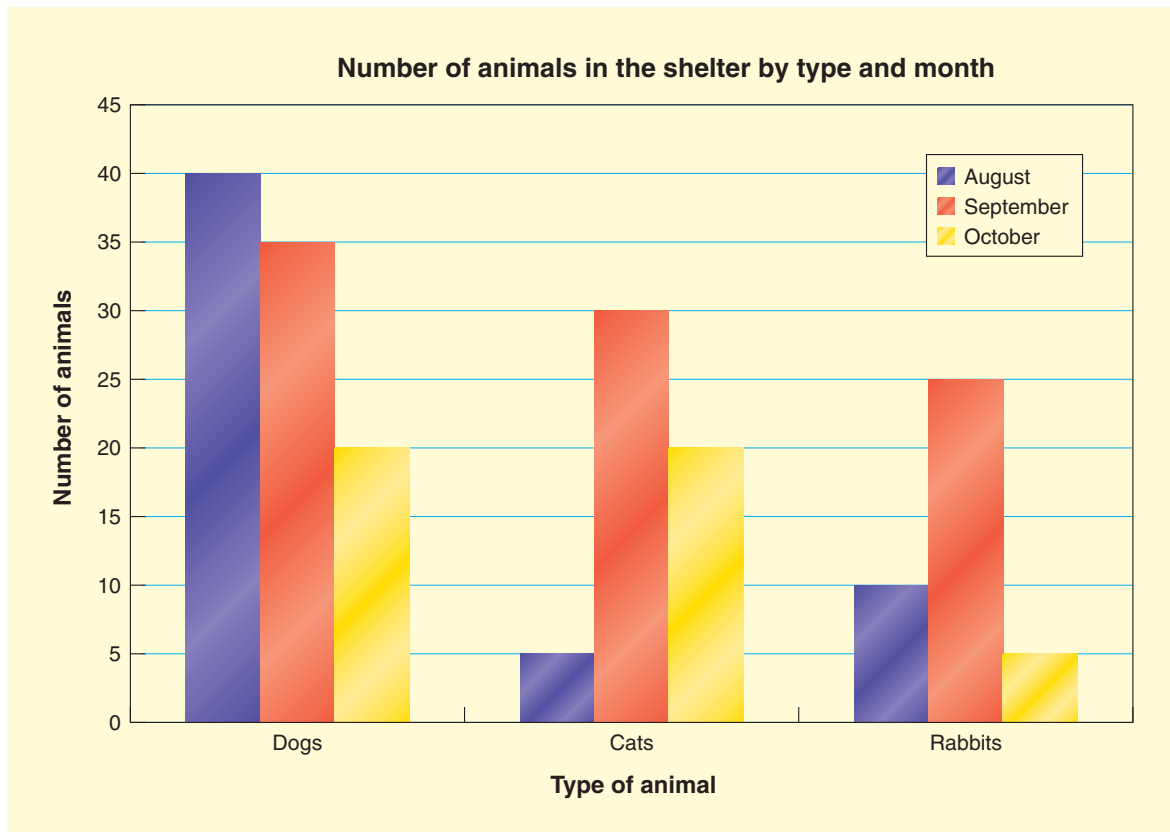
- 1 When was the information gathered?
- 2 What do the red columns show?
- 3 How many large crossbreeds do we have?.....
- 4 How many small pedigree dogs do we have?
- 5 How many medium dogs do we have altogether?
- 6 Which size of dog do we have most of?
- 7 How many pedigree dogs are there in the shelter?

Are there more or less?

We need to compare the numbers of animals we have in the shelter from month to month.

Activity 5

We use bar charts to help us compare figures about the animals. Here is a bar chart showing the number of dogs, cats and rabbits at the shelter in August, September and October.



The yellow columns show the numbers for October.

1 Which month is represented in blue?

The shortest column for dogs is yellow, so we had fewest dogs in October.

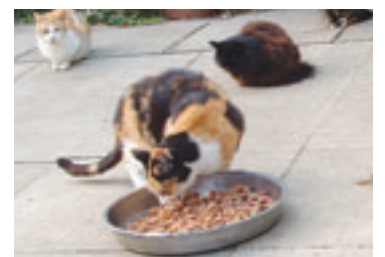
2 We had most dogs in

3 We had fewest cats in

Now use the chart to find the numbers of animals.

4 We had rabbits in September.





5 We had cats during the three months shown.





Activity 6

People come to the shelter to choose a pet. I use pictograms to help them understand and compare information.

The number of people who took cats from the shelter in the first four months of 2002

Month	
January	
February	
March	
April	

 represents 5 people.  represents 4 people.

- 1 What does  represent?
- 2 What does  represent?
- 3 Count up the symbols and complete the table below to show the numbers of people who re-homed cats.

January	February	March	April

- 4 In which month were most cats re-homed?
- 5 Write down a quick way of finding the answer.
- 6 In which month were fewest cats re-homed?
- 7 Write down a quick way of finding the answer.

Remember

Pictograms

- Try to use a simple symbol or picture – remember, you may have to draw each one many times and they **must** be identical!
- Symbols must be in neat columns and rows.
- Include a key to show the number of items a symbol stands for.
- Use part of the symbol to represent smaller numbers.

Review

Do you need more practice in using bar charts or pictograms?

Yes No

This work links to mini-project M4 (page 15).

Tally!

*We collect lots of information about our animals.
We use a tally chart to record the information.*

Remember

Tallying

- For each unit, you write a tally mark, like this | .
- When you have five units, make your fifth line go through the other four, like this: ~~||||~~ . You can then count the answers in batches of 5.
- Tick or cross off each entry as you put it into the tally chart. This will help you to keep track of which results you have not yet tallied.



Activity 7

We need to find out if the new owners already own a dog.

We asked 20 people wanting to re-home a dog how many dogs they already had.

These were the answers.

0 dog ✓	0 dog ✓	0 dog ✓	0 dog ✓
0 dog ✓	1 dog ✓	2 dogs ✓	0 dog ✓
1 dog	0 dog	0 dog	0 dog
0 dog	0 dog	2 dogs	1 dog
0 dog	0 dog	0 dog	3 dogs



Most people had no dogs but some have one or two, or even three.

Use the tally chart below to count the answers. The first two rows have been done.

1 Finish the tally chart below.

The number of dogs re-homers already have

Number of dogs	Tally	Frequency
0	 	
1		
2		
3		
	Total	

2 When you have finished tallying, count the number of tallies in each row. Write the totals in the last column.

Use the tally chart to answer these questions.

- 3 How many re-homers have only one dog?
- 4 How many re-homers have no dogs?
- 5 How many re-homers have two dogs?
- 6 We must visit any home with two or more dogs before we allow another dog to go there. How many homes must we visit?

Activity 8

These figures show the number of cats re-homed each week during the first half of 2002.

3	2	4	1	2	4	2
1	3	3	1	1	0	1
0	1	0	5	2	3	
5	1	2	2	3	0	

1 Complete the tally table below.

Cats re-homed each week during the first half of 2002

Number of cats	Tally	Total
	Total	

- 2 In how many weeks were no cats re-homed?
- 3 What was the largest number of cats re-homed in any one week?

Review

Do you need more practice in tallying?

Yes No

For more work on this, go to H3 (page 13) or E1 (page 14).

This work links to mini-project M1 (page 15).

A picture is worth a thousand words

Activity 9

Here are the results of our survey of how many dogs people already own.

Fourteen people do not own a dog, three people own one dog, two people own two dogs, and one person owns three dogs.

You can use a table to make the figures easier to read.

Results of the dog owner survey

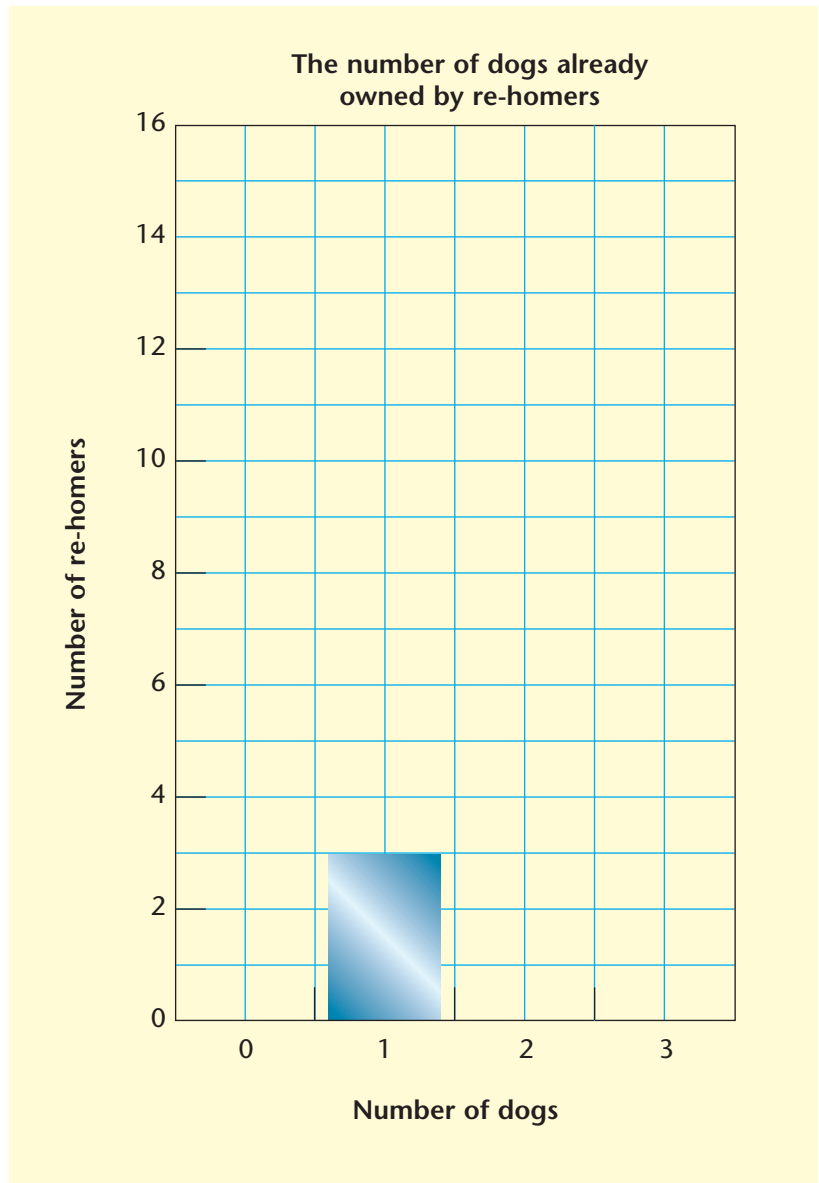
Number of dogs	0	1	2	3
Number of owners		3		

Put the rest of the results into the table.

Activity 10


I decide to use a bar chart to show the results of how many dogs re-homers own already.

Use the information in the table in Activity 9 to finish the bar chart.




Activity 11


I decide to draw a pictogram. I think it is a good way to show my information.

The first thing to do is to decide how I can show the people. I think stick people are easy to draw. I can use a stick person to show two people .

How many dogs do re-homers already have?

Number of dogs	Re-homers						
0							
1							
2							
3							

Key

 represents 2 re-homers

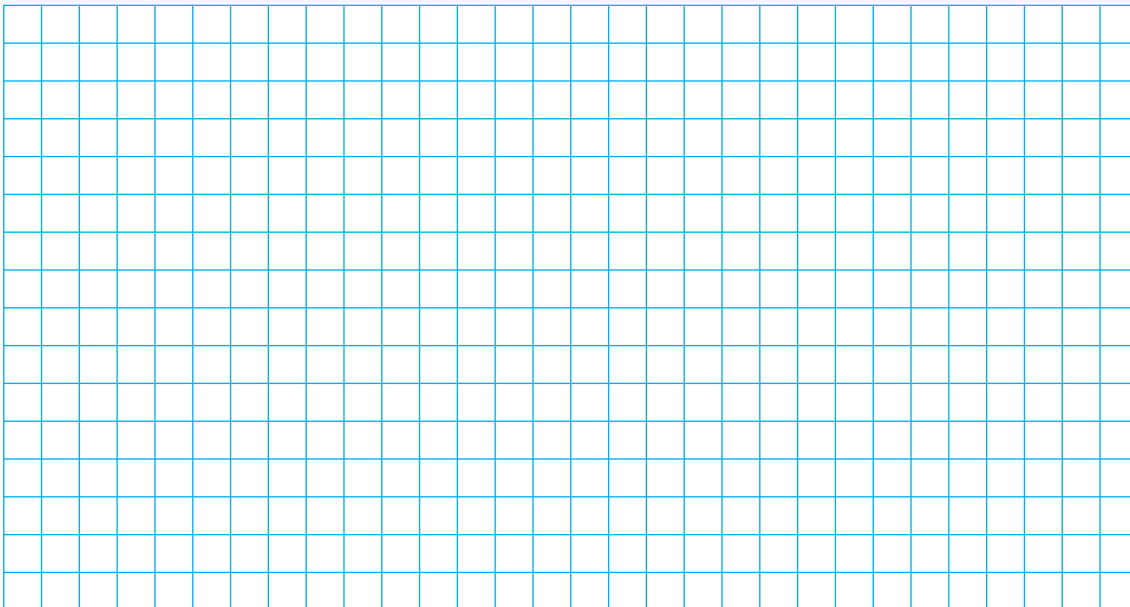
Complete the pictogram.

Activity 12

The numbers of rabbits already owned by people re-homing a rabbit are shown in the table.

Number of rabbits owned	0	1	2	3
Number of re-homers	10	5	2	3

Draw a bar chart or pictogram to show this information on the grid below.



Review

Do you need more practice in tables, bar charts and pictograms?

Yes No

For more work on this, go to H3 (page 13) or E2 and E3 (page 14).

This work links to mini-projects M2 and M4 (page 15).

Activity H1

People come to the animal shelter when they are looking for a pet. They want to give a new home to an animal that has no home. If you are looking for a new pet, you need to know when the animal shelter is open. Here are the opening times.

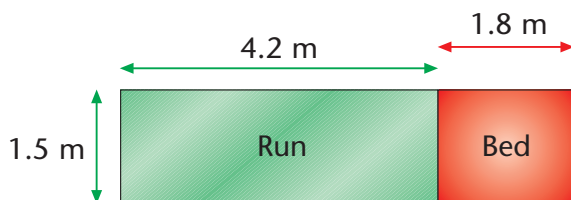
Day	Opening times
Monday	12:00 noon – 4:00 pm
Tuesday	[Closed]
Wednesday	12:00 noon – 4:00 pm
Thursday	12:00 noon – 4:00 pm
Friday	12:00 noon – 4:00 pm
Saturday	11:00 am – 2:00 pm
Sunday	11:00 am – 2:00 pm



- 1 On what day is the animal shelter closed?
- 2 What time does the animal shelter open on Mondays?
- 3 What time does the animal shelter close on Thursday afternoons?
- 4 What are the opening times on Saturdays and Sundays?

Activity H2

Dog pens have a special area for a bed and a large area for the dog to run.



- 1 How long is the pen? metres
- 2 How wide is the run? metres
- 3 How long is the bed area? metres



Activity H3

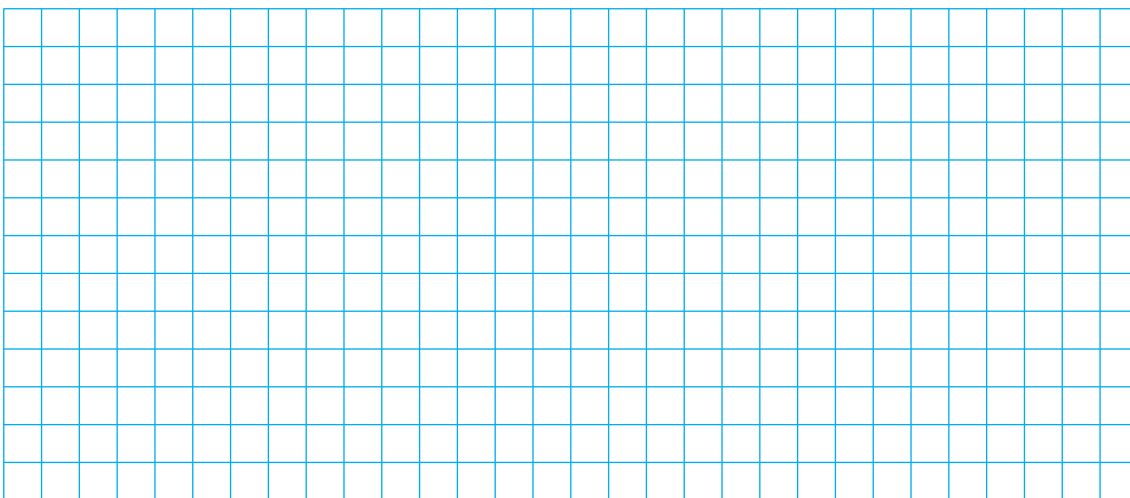
Most visitors come to the animal shelter on Saturday. I decided to count them as they arrived. Some people came on their own (1), others came as a couple (2) or group (3 or more). Here are my results:

2 3 1 2 2 2 1 2 4 3
3 1 2 4 3 3 2 2 2 2
2 4 3 3 2 4 3 1 3 2
1 2 2 3 1 1 3 3 2 1

Visitors to the animal shelter on Saturday

Number of people in group	Tally	Frequency
1		
2		
3		
4		
	Total	

- 1 Tally the results.
- 2 Draw a bar chart to show the number of visitors.



- 3 On separate paper, draw a pictogram to show the number of visitors.

Look back at the *Remember* boxes on pages 4 and 7 and check that you have included everything.