Mathletics

Data Representation

My name

Series F – Data Representation

Contents

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Types of graphs 1 – pictographs

Pictographs are used to display large amounts of data. A symbol is chosen to represent a specific amount. Pictographs have a title that tells us what data has been collected, category labels and a key to show the value of the symbol.

How many watermelon juices were sold?

$$4 + 4 + 4 + 4 + 2 = 18$$

Juices sold in a day   Key: 🥤 = 4 juices

Carrot	🥤 🥤 🥤
Watermelon	🥤 🥤 🥤 🥤 🥤
Orange	🥤 🥤 🥤
Apple	🥤 🥤 🥤 🥤

1 **At the bus terminal buses arrive and depart at regular intervals. This pictograph shows the number of buses that departed the bus terminal in one week. Use the graph and the key to answer the following:**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
🚌	🚌	🚌	🚌	🚌	🚌	🚌
🚌	🚌	🚌	🚌	🚌	🚌	🚌
🚌	🚌	🚌	🚌	🚌	🚌	🚌
🚌	🚌	🚌	🚌	🚌	🚌	🚌
	🚌	🚌	🚌	🚌	🚌	
			🚌	🚌	🚌	
			🚌			

Key: 🚌 = 10 buses

a On which day did 55 buses depart?

b Which is the terminal's busiest day?

c How many buses depart on this day?

d How many buses leave on Tuesday?

e How many more buses depart on Friday than Saturday?

....

2 **This graph shows the number of tickets bought at the local cinema.**

Movie Classification	Tickets Bought
Comedy	MOVIE MOVIE MOVIE MOVIE MOVIE MOVIE
Children	MOVIE MOVIE MOVIE MOVIE MOVIE MOVIE
Horror	MOVIE MOVIE MOVIE MOVIE
Action/Drama	MOVIE MOVIE MOVIE MOVIE

Key: MOVIE = 100 tickets

a How many tickets were bought for Comedy and Children movies?

b What was the total amount of tickets bought?

Types of graphs 1 – pictographs

3   **5F put on a dance competition. Use the graph and key to answer the following:**

Ticket Sales   **Key:** [ticket] = 20 tickets

Week 1	[ticket] [ticket] [ticket] [ticket]
Week 2	[ticket] [ticket] [ticket] [ticket] [ticket]
Week 3	[ticket] [ticket] [ticket] [ticket] [ticket] [ticket]
Week 4	[ticket] [ticket] [ticket] [ticket] [ticket]
Week 5	[ticket] [ticket] [ticket] [ticket]

a   How many tickets does each [ticket] represent?

b   How many tickets were sold in Week 1?

c   How many tickets were sold in Week 5?

d   In which week were the most tickets sold?

e   How many tickets were sold that week?

f   During which two weeks were the same number of tickets sold?

g   How many more tickets were sold in Week 3 than Week 1?

h   How many tickets were sold during the entire sales period?

....

4   **A student found a mistake in the data. The maximum number of attendees for any one week was actually 60.**
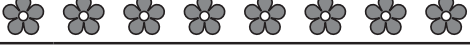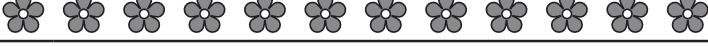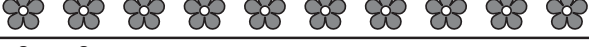
a   How many tickets does each symbol now represent?

b   How many tickets were really sold during the entire sales period?

Data Representation

Types of graphs 1 – pictographs

5 Students sold plants to raise money for charity. This pictograph shows their collection for the first week. Use this graph to answer the following:

Week 1 Plant Sale

Ethan	🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸
Claire	🌸 🌸 🌸 🌸
Pablo	🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸
Heba	🌸 🌸 ⸽
Reece	🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸
Mia	🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸
Rania	🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸 🌸
Hassan	🌸 🌸

Key: 🌸 = 4 plants

a Who sold 56 plants?

b Who sold $\frac{1}{2}$ dozen plants?

c Mia sold _____ plants.

d How many plants did Ethan sell?
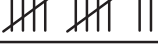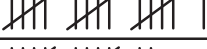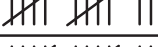
e How many plants were sold altogether?

f If each plant sold for $2, how much money did the group raise for charity?

....

6 Plants sold in Week 2 of the charity drive appear in the tally column of this table. Represent this information using symbols. The first student has been done for you:

Week 2 Plant Sale Key: 🌸 = 4 plants

Student	Tally	Pictograph
Ethan	ⅣⅣ ⅣⅣ ⅣⅣ ⅣⅣ ‖‖	🌸 🌸 🌸 🌸 🌸 🌸
Claire	ⅣⅣ ⅣⅣ ⅣⅣ ‖‖	
Pablo	ⅣⅣ ⅣⅣ ⅣⅣ ‖	
Heba	ⅣⅣ ⅣⅣ ‖	
Reece	ⅣⅣ ‖‖	
Mia	ⅣⅣ ⅣⅣ ⅣⅣ ‖	
Rania	ⅣⅣ ⅣⅣ ‖	
Hassan	ⅣⅣ ⅣⅣ ⅣⅣ ⅣⅣ ⅣⅣ ⅣⅣ ‖	

a During Week 2, how much money was raised altogether? Each plant is $2.

b A prize was given at the end of the two weeks to the student who raised the most money. Who won?

Types of graphs 1 – bar graphs

We often use bar graphs when we want to compare data. All bar graphs have a title and each axis is labelled.

From this we can quickly see that 16 white cars were sold in March and that this was the most popular colour choice.

Colour of Cars Sold in March

(Bar graph: y-axis "Number of Cars" 0–16, x-axis "Car Colour" – Blue 11, White 16, Red 8, Black 14)

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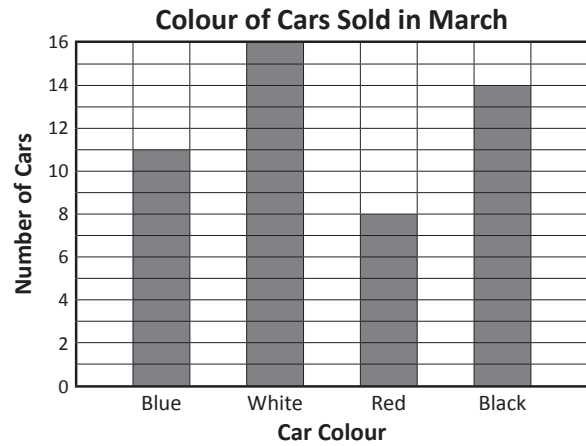
1 Answer the questions about this bar graph:

Total Rainfall in October

(Bar graph: y-axis "Rainfall (mm)" 0–100, x-axis "Capital Cities" – Paris 55, London 75, Sydney 80, Tokyo 95, Rome 100)

Key: ▮ Oct   ☐ Nov

a Which city had the highest rainfall in October?

b What was this city's rainfall?

c Which cities had a rainfall between 70 mm and 90 mm?

d How many more millimetres of rain did Rome have than Paris?

....
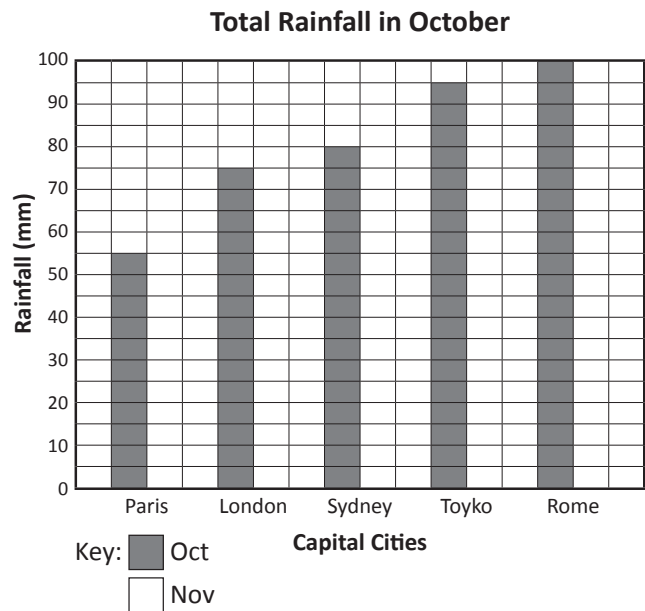
2 Below are the November figures for the same cities. Add them to the graph (above). Think first how best to do this:

Paris 65 mm   London 40 mm   Sydney 95 mm   Tokyo 60 mm   Rome 30 mm

a Will you use the same colour bars?

_____

b Will you need to change anything else on the graph?

_____

....

3 Write a problem using the new data for a partner to solve:

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4 SERIES F TOPIC 1

Data Representation

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Types of graphs 1 – bar graphs

4 **The after care kids want to do something new and exciting on Wednesdays. This table shows the activities they'd prefer.**

a Help them present a case to the principal by completing the bar graph:

Activity	Number of Students
No change	1
Swimming	30
Art	11
Soccer	18
Dancing	23
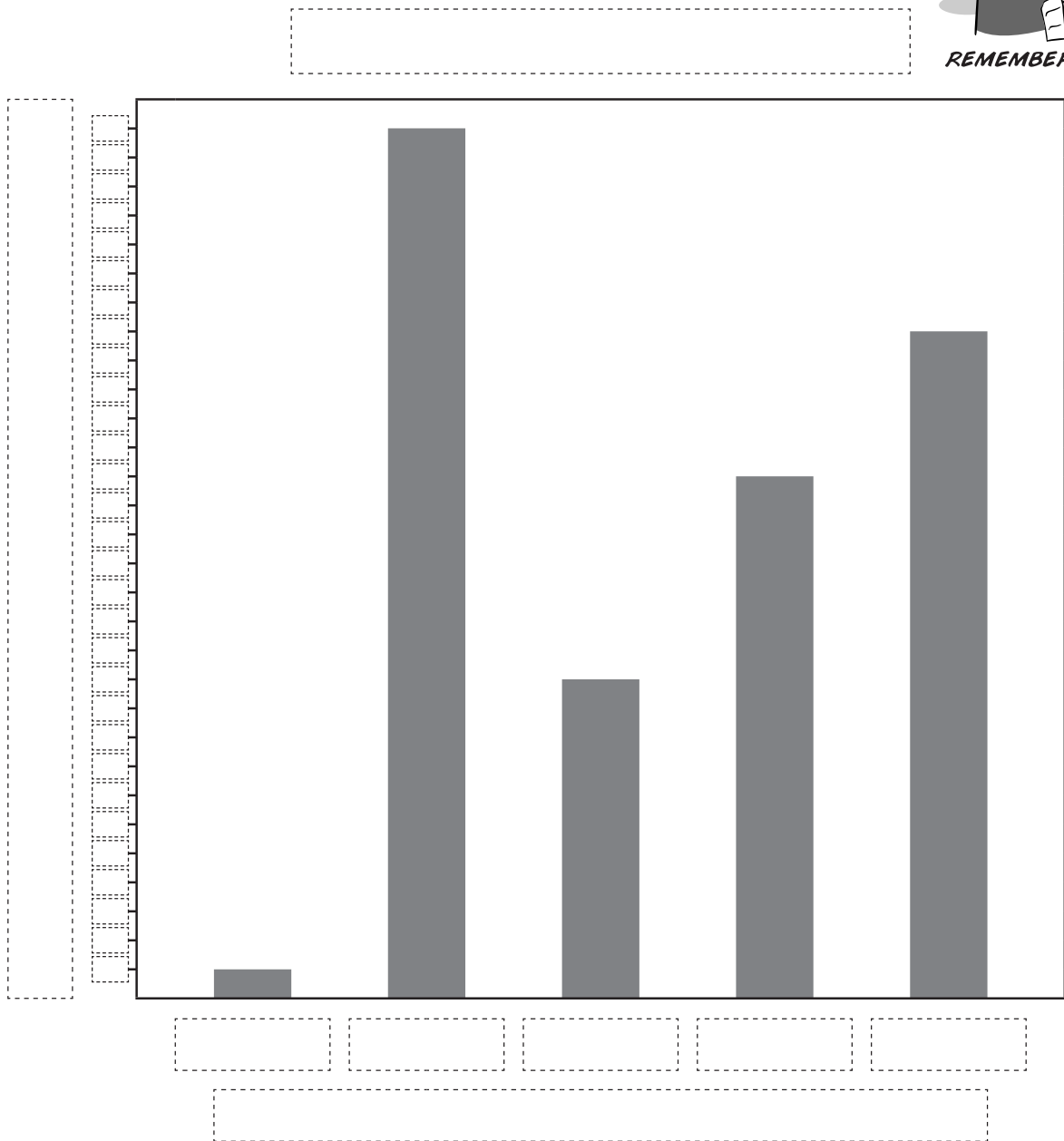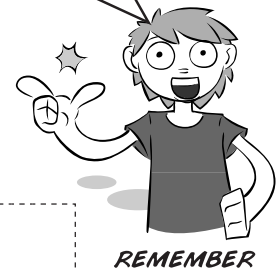
b What are some key issues on the graph you'd point out? Work in a small team to come up with a solution. Pretend your teacher or another group is the principal and present your case.

Types of graphs 1 – bar graphs

5 5D decide to run a recycling campaign and collect cans in and around the school. They recorded how many cans were collected each week and started constructing this bar graph. In Week 3 they collected 40 cans and in Week 4 they collected 10 cans.
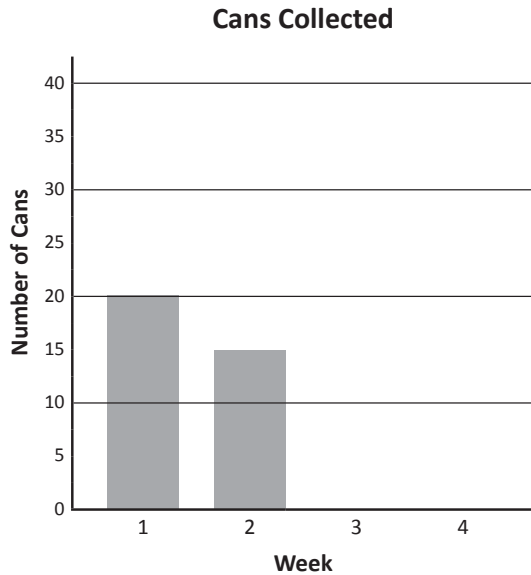
Cans Collected

a Add Week 3 and 4 data to the graph.

b There was a canned goods special at the local store during one of the weeks. Which week do you think it was and why?

_____

_____

_____

c How many cans were collected in all?

d If each can is worth 5¢, how much money did 5D make from the campaign?

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6 The same information can be represented in different graphs.

a Design a bar graph to represent the data shown in this pictograph.
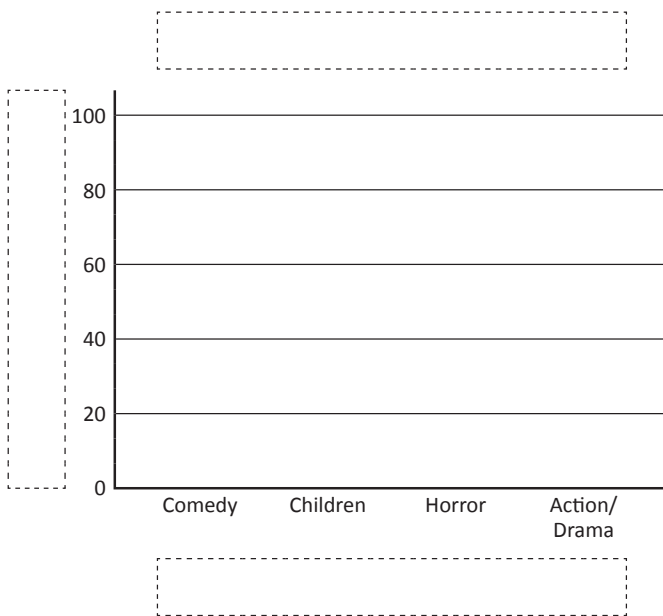
Type of Movie	Ticket Sales
Comedy	MOVIE MOVIE MOVIE MOVIE MOVIE
Children	MOVIE MOVIE MOVIE MOVIE MOVIE
Horror	MOVIE MOVIE MOVIE MOVIE
Action/Drama	MOVIE MOVIE MOVIE MOVIE

Key: MOVIE = 20 tickets

☐ **Name your graph**
☐ **Label both axes**
☐ **Select and label an appropriate scale**
☐ **Label each bar**

REMEMBER

b If you ran a cinema and wanted to plan your weekly movie schedule, which graph would you prefer? Which type of graph makes it easier to analyze and compare data?

Data Representation

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Types of graphs 2 – circle graphs

A circle graph, also known as a pie chart or sector graph, shows data as parts of a whole. The circle represents the total amount while the segments are the parts. When we compare the parts to the whole, we're looking at proportion. This is often written as a fraction.

This circle graph shows the favourite fruits of 10 people.

Favourite fruits of 10 people

Mango 1

Strawberry 2
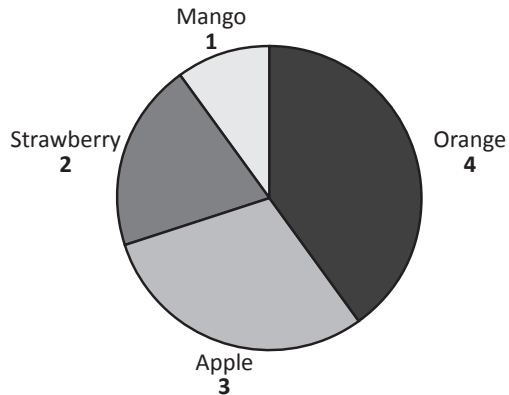
Orange 4

Apple 3

The table below summarizes the information displayed on this graph.

Category	Amount	Fraction
Apple	3	$\frac{3}{10}$
Strawberry	2	$\frac{2}{10}$
Mango	1	$\frac{1}{10}$
Orange	4	$\frac{4}{10}$
Total	10	$\frac{10}{10}$

1 Colour and label this circle graph according to the information in the table:

Favourite colours of 10 people
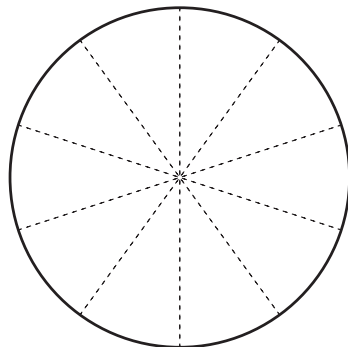
Category	Amount	Fraction
Red	3	
Blue	2	
Yellow	5	
Total		

2 A group of students was surveyed to find out what they spend their pocket money on. This circle graph shows the results. Circle True or False next to each statement.

a More than half the students surveyed spent their money on a mobile phone.

True / False

b $\frac{4}{20}$ surveyed spent their money on food.

True / False

c 20 students were surveyed in total.

True / False

What do students spend their pocket money on?

Toys 1

Food 3

Music 4

Mobile phone 12
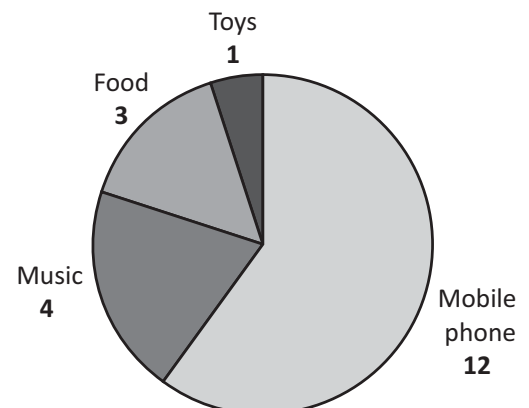
Types of graphs 2 – circle graphs

3 **5F and 5H were planning a lunch and conducted a survey of favourite sandwich fillings. This circle graph shows the results.**

Sandwich Survey
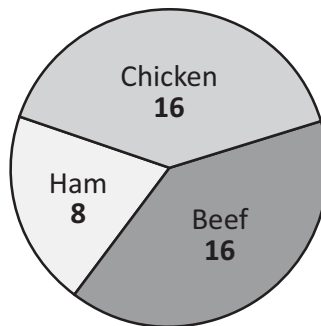
a Complete the summary table if there are 40 students altogether.

Category	Amount	Fraction
Chicken		
Ham		
Beef		
Total	40	$\frac{10}{10}$

b Their teacher said they could order 10 trays of sandwiches. How many trays of each kind should they get?

Chicken ☐   Ham ☐   Beef ☐

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4 **To boost ratings, Radio Non-Stop-Hits ran a promotion where they gave away prizes every hour. This circle graph shows the distribution of 60 prizes that they gave away.**

Types of Prizes
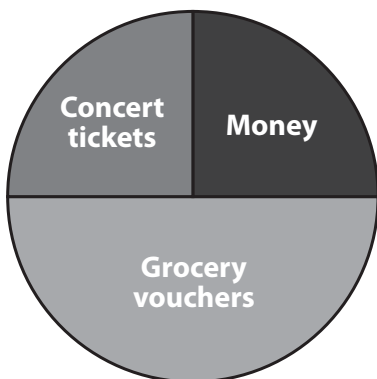
a How many of each prize were given out?

Concert tickets ☐   Grocery vouchers ☐   Money ☐

b The radio station's accountant realized the circle graph was correctly divided but there'd been a miscalculation in the number of prizes given out. There'd actually been 25 money prizes given away. Calculate the actual amounts:

Concert tickets ☐   Grocery vouchers ☐   Money ☐

---

5 **The total amount that this graph is representing is 40. What could this be about? Give this circle graph a title and describe it by completing the table below:**

Category	Amount	Fraction
Total		

Data Representation
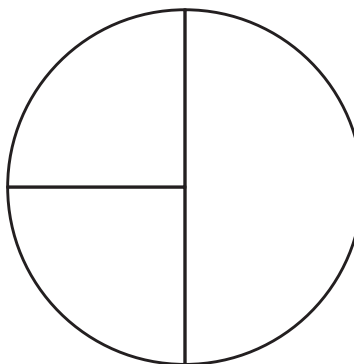
Types of graphs 2 – circle graphs

6 **Create your own circle graph.**

    a Ask 10 students to choose which season they like best.

    b Use the table below to collect your data.

    c Show the results on a clearly labelled circle graph.

Season	Tally	Amount
Winter		
Spring		
Summer		
Autumn		

    d What fraction of the group surveyed chose winter?

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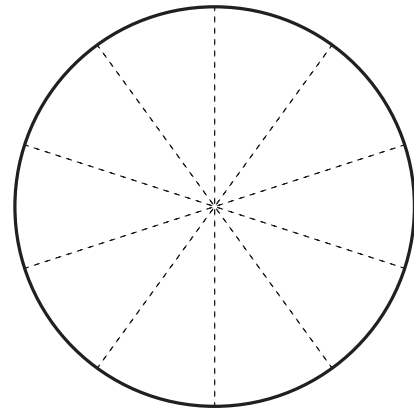
7 **Survey 10 children on the topic of favourites. You can ask about favourite foods, TV shows, music or whatever you like.**

    a Write the topic at the top of the first column.

    b Write 4 options to choose from underneath.

    c Record your results in the frequency table below.

    d Transfer the data from the frequency table to the circle graph.

    e Label all sections correctly.

	Tally	Amount

    f Write a statement about what your circle graph shows:
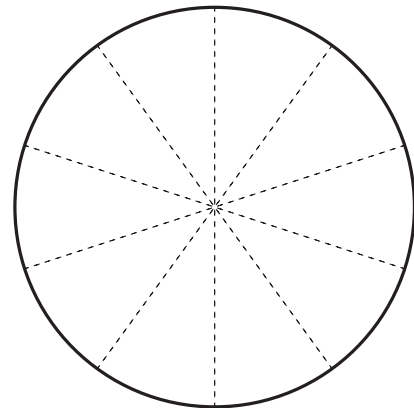
Types of graphs 3 – reading graphs

Broken-line graphs show how something changes over time in relation to something else. In this topic, we'll look at different examples of broken-line graphs. Look at the broken-line graph below. See how the more time passed, the higher the water got?

In which hour was the water 8 metres deep? Look below for how we read this information:

Rise in Flood Waters

y-axis: Water depth (metres)
x-axis: Time (hours)

8 m

4 hours
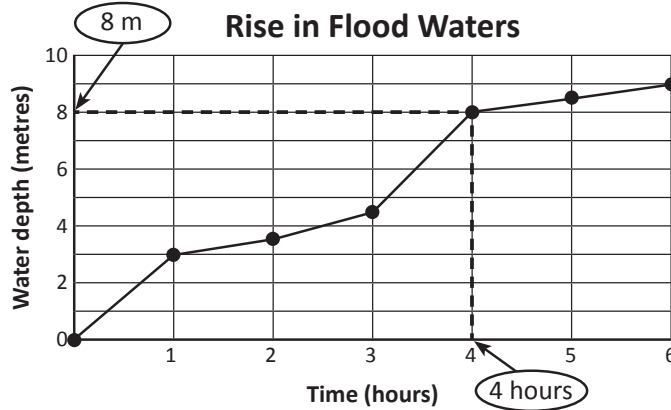
1 **Look carefully at this broken-line graph and answer the questions:**

Forest Loss in Disfushi Island

y-axis: Annual Forest Loss (thousand km²)
x-axis: Year
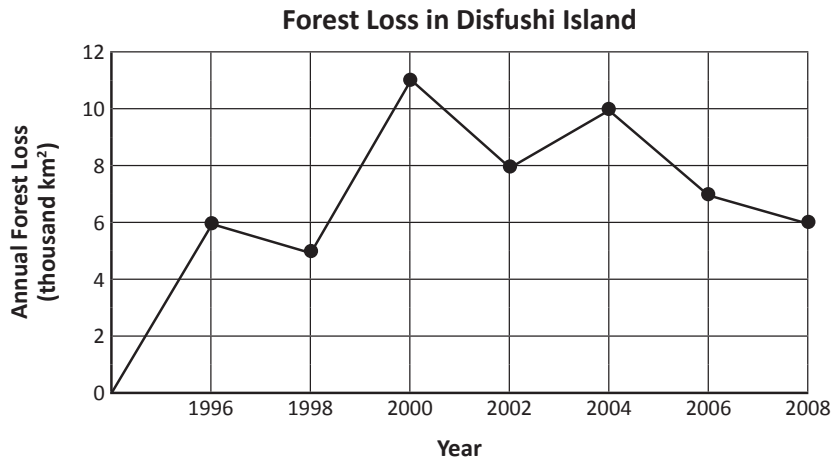
a How many square kilometres of forest was lost in 1996?

b How many square kilometres of forest was lost in 2000?

c In which year were 7000 square kilometres of forest lost?

d How much more forest was lost in 2000 than in 2008?

e Use the graph to estimate the forest loss in 1999.

f Use the graph to estimate the forest loss in 2003.

Data Representation

Types of graphs 3 – reading graphs

2 Polly and her friend Molly were practising reading a thermometer for homework. They boiled water in a kettle and then took turns measuring the temperature every minute as it cooled down. To make this more interesting, they made it a guessing game.

Look at the graph and answer the questions to see how they went:

a Polly guessed that after 1 minute the temperature would be 46 °C. Was she right?

b Molly guessed that after 2 minutes the temperature would be 34 °C. Was she right?

Look closely at the graph they made showing the temperature of the water in the kettle.

c What is the value of each small division on the temperature axis?

Cooling Water

Temperature (°C) vs *Time (minutes)*

d By how much did the water cool down between 2 minutes and 4 minutes?

e How long did the water take to cool to 19 °C?
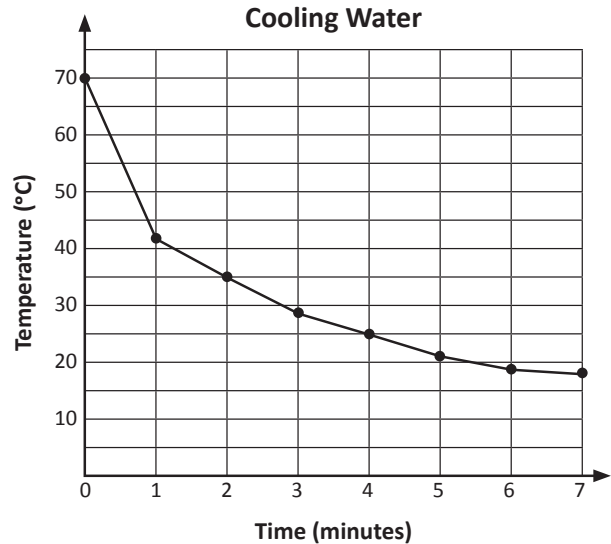
3 This graph shows a kite's height at different times. Answer the questions below:

Height of Kite

Height (metres) vs *Time (seconds)*
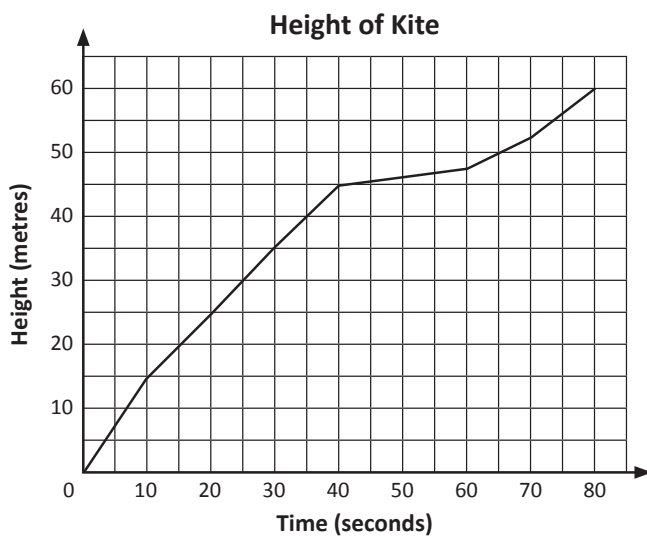
a What was the kite's height at 65 seconds?

b How long did the kite take to rise from 25 metres to 40 metres?

c Estimate the height of the kite at 1 minute.

d If the kite continued to rise, how high do you think it would be after 90 seconds?
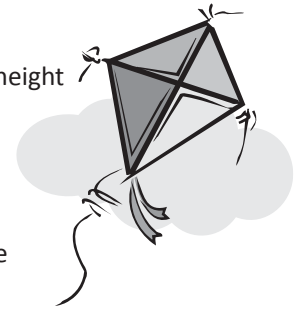
Types of graphs 3 – constructing graphs

Let's see how to build a graph from a data table.

This data shows the rate of filling a fish tank with water.

Minutes	1	2	3	4	5
Litres	15	30	45	60	75

Usually, we join the dots, but sometimes we don't.

Step 1

Carefully plot the data from the table.

Rate of Filling a Fish Tank
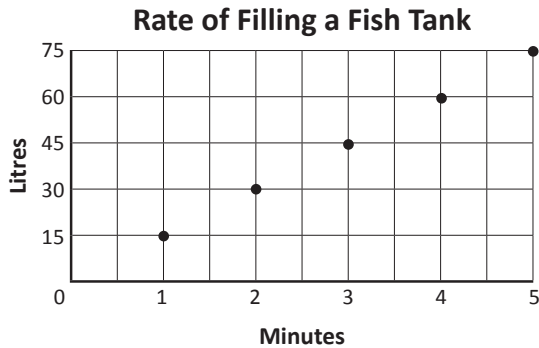
Step 2

Join the points with straight lines.

Rate of Filling a Fish Tank

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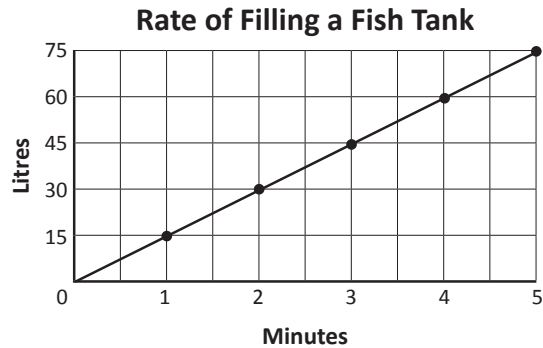
1 **The average rate that water evaporates from an indoor swimming pool is 6 mm a month.**

a Complete this table to show how much water will evaporate over 6 months:

Millimetres	6					
Month	January	February	March	April	May	June

b Label the vertical axis with an appropriate scale, then plot the points and join the points with a ruler. What else do you need to add to make this graph complete?

Water evaporated in mm

January   February   March   April   May   June

Months of the Year
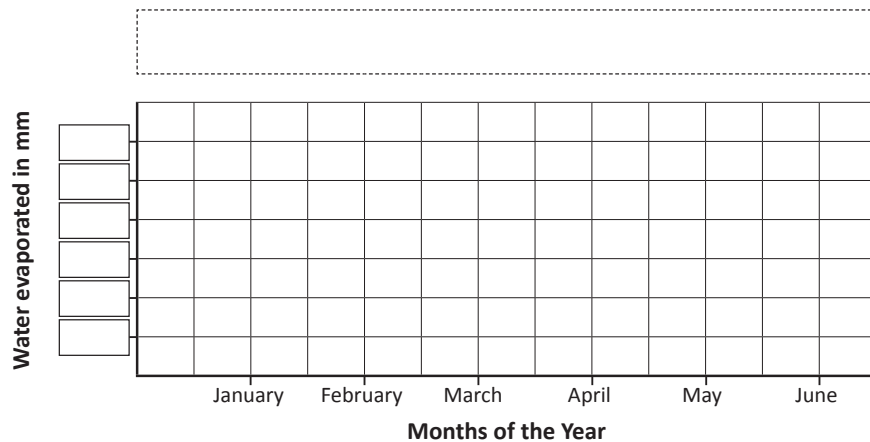
c Write 2 questions about this graph and write the answers.

Data Representation

Types of graphs 3 – constructing graphs

2 **A car uses 8 litres of gas for every 50 km travelled.**

a Complete this table to show how much gas is needed for a journey:

Litres	8	16	24	32	40	48	56	64	72	80
Kilometres	50									

b Complete this line graph:
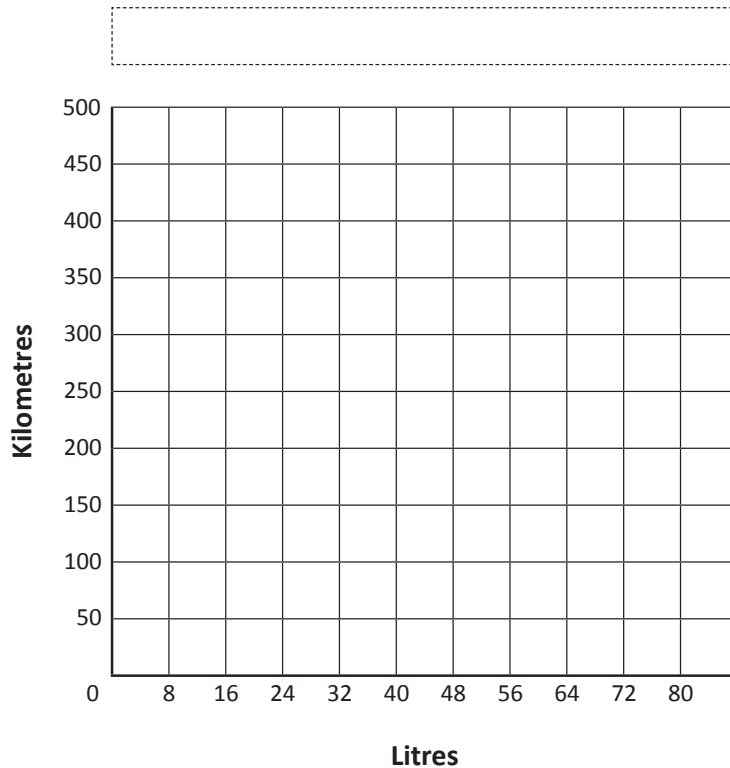
c How far can the car go on 32 litres of gas?

d How many litres of gas are needed to travel 450 km?

e How far would a car travel on 12 litres of gas?

f How far would you have travelled if you used 96 litres of gas?

g If this car's fuel tank had a capacity of 40 litres, how many times would you need to fill it if you wanted to travel 500 km?

Types of graphs 3 – broken-line graphs

A broken-line graph can show the distance travelled and the time taken to travel that distance. We can tell a lot about a journey just by the shape of a line.

Between 8 am and 12 pm, it travels 200 km. This is 50 km per hour.

Here we see the car stops for one hour. We know this because it stays at 200 km from home between 12 pm and 1 pm. This tells us it's not moving.

Journey of a Car

Between 1 pm and 2 pm, the car travels at 100 km per hour.

This car leaves home at 8 am for a holiday.

Distance from home (km)

400
300
200
100

0 8 am 9 am 10 am 11 am 12 pm 1 pm 2 pm 3 pm

Time (hours)

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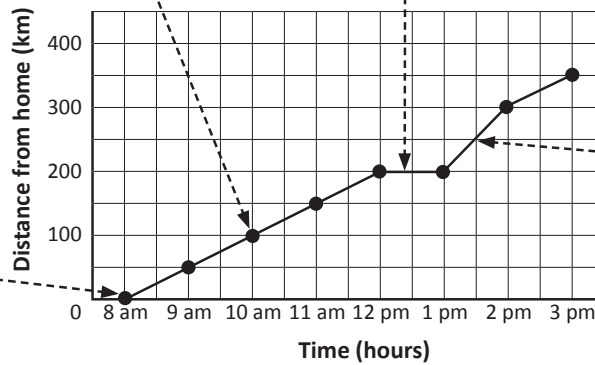
1 **This broken-line graph shows the journey of the Henderson family on a driving holiday.**

a What time did they leave home?

b How long was their first rest stop?

c How far had they travelled by 10 am?

d At what speed were they travelling between 3 pm and 5 pm?
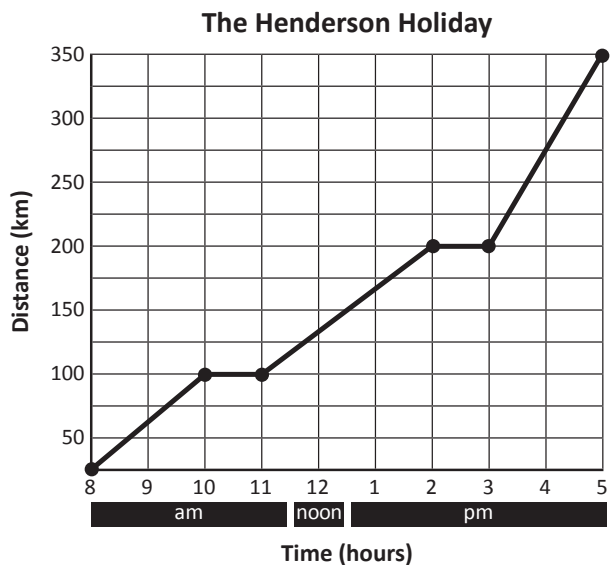
e What could they have been doing at 2.30 pm?

_____

f How long was the journey, excluding rest stops?

The Henderson Holiday

Distance (km)

350
300
250
200
150
100
50

8   9   10   11   12   1   2   3   4   5
        am   noon   pm

Time (hours)

F 3

SERIES TOPIC

Data Representation
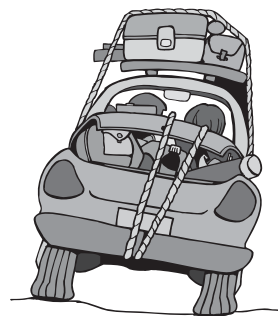
Types of graphs 3 – broken-line graphs

2   **Look carefully at this journey of a cyclist and fill in the blanks.**

a   I started training at [ ].

b   I met a friend for breakfast at [ ].

I continued again at [ ].

c   By 8 am I had cycled [ ] km.

d   Due to a flat tyre, I had to stop again at [ ].

e   I turned around to cycle all the way home at [ ].

f   I got home at [ ] and had a nice long bubble bath.

Julie's Cycling Training
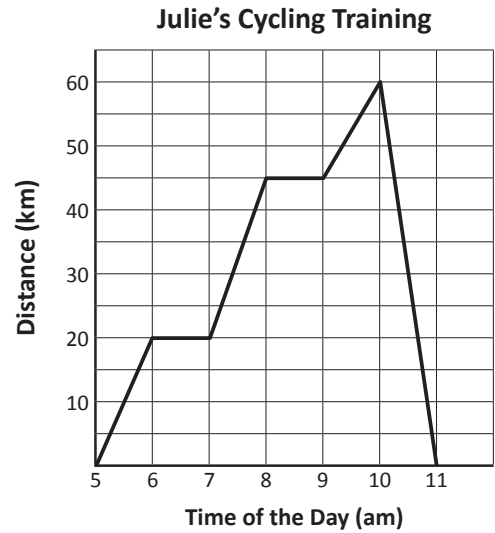
3   **Connect each graph to the matching statement with a line.**

| I was on my way to school when I felt sick, so I turned around and went home again. | On the way to the shops we stopped to get gas. | We travelled at the same speed, not stopping until we got there. |
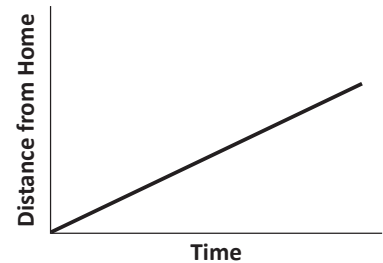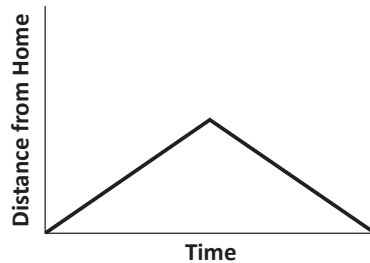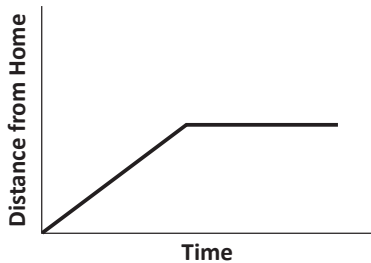
Collecting and analyzing data – frequency tables

Raw data is often collected in a frequency table. Tally marks are a quick way to record numbers. When we're finished, we add the marks to find totals:

Car Types in Car Park	Tally	Frequency
4WD	|||| |||| |||| ||||	20
Sedan	|||| |||| |||| ||	17
Station wagon	|||| |||| |||| ||||	20
Hatchback	|||| |||| ||||	14

1   **Charlie works in a grocery store. He wrote down the drinks he sold each day:**

Monday	Milk	Lemonade	Water	Juice			
Tuesday	Juice	Juice	Milk	Milk			
Wednesday	Water	Juice	Juice	Juice	Milk	Lemonade	
Thursday	Water	Water	Water	Milk	Milk	Juice	Lemonade
Friday	Lemonade	Water	Juice	Milk	Milk	Juice	
Saturday	Milk	Milk	Milk	Juice	Juice	Water	Water
Sunday	Lemonade	Lemonade	Milk	Juice	Water	Milk	

a   This is a time-consuming way to record data. Show Charlie how to set up a frequency table to record the same data faster. The first one has been done for you.

Type of Drink	Tally	Frequency
Milk	|||| |||| |||	13
Juice		
Water		
Lemonade		

b   Represent your data in a bar graph:
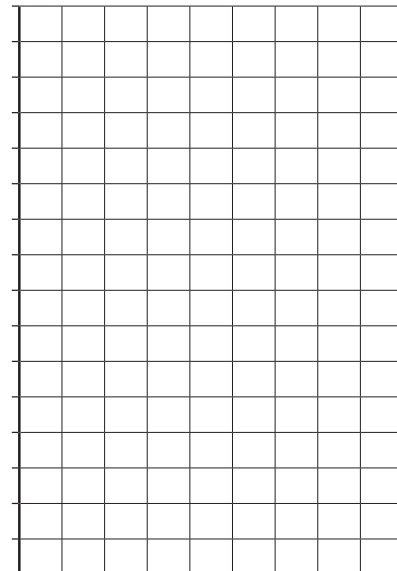
- [ ] **Name your graph and both axes**
- [ ] **Label each bar**
- [ ] **Select and label an appropriate scale**

REMEMBER

Data Representation

Collecting and analyzing data – mean

When we say we're finding the 'average', we're finding the mean. To do so, we add all the scores then divide by the number of scores:

For example, the mean of 2, 3, 4, 5, 6 $= \dfrac{2+3+4+5+6}{5} = 4$

So if the numbers above represented eggs laid by 5 ducks, it means that each duck laid an average of 4 eggs.

1 **Find the mean in each set of data by adding the scores and then dividing by the number of scores:**

a 13, 4, 7, 11, 5

$= \dfrac{13+4+7+11+5}{5}$

$= 40 \div 5$

$=$ _____

b 9, 13, 5

c 3, 5, 9, 2, 6

2 **Look at the following diving scores:**

Marita 7.2	Ben 9.4	Ari 4.6	Mia 7.6

a Calculate the mean.

b Who was closest to the mean?
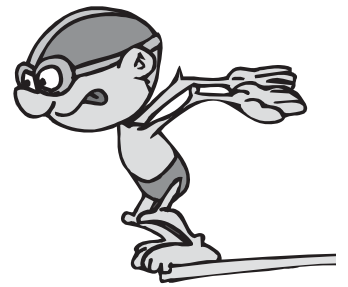
3 **The table below shows the number of goals scored over a 5 week period by 3 soccer teams:**

	6/3	13/3	20/3	27/3	3/4	Total	Mean
Fantastic Footballers	2	0	2	8		16	
Serious Socceroos	3	2	4	1			3
Dangerous Dribblers	0	0	0	0	15		3

a Complete the table by filling in the missing information.

b Which team has scored the most goals?

c Which team has the highest mean?

d You're thinking of joining either the Serious Socerooos or the Dangerous Dribblers. They both have a mean of 3 goals per game. Which team do you think would be more competitive and why?

Collecting and analyzing data – mean

4 Emma has just moved into a new neighbourhood and wants to start babysitting. She asks the girls at school what they charge and records this information in a graph:

Price Charged Per Hour of Babysitting
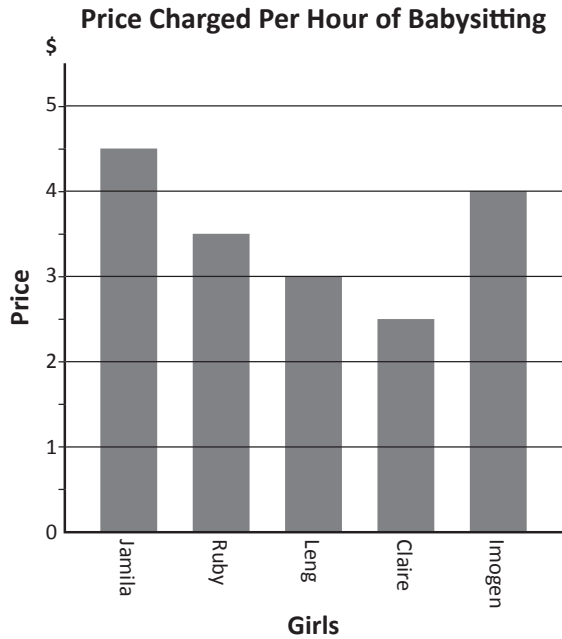
a If Emma wants to undercut all the others, what would you recommend she charge per hour?

b If Emma wants to position herself as an exclusive (expensive) babysitter, what would you recommend she charge per hour?

c Emma decides to charge the mean price per hour. What does she charge?

d Ruby decides to add a booking fee of 50¢ per hour. How does this change the mean price charged by the group?

....

5 Here is a graph showing the temperature in London:

Temperature in London Over One Week in March
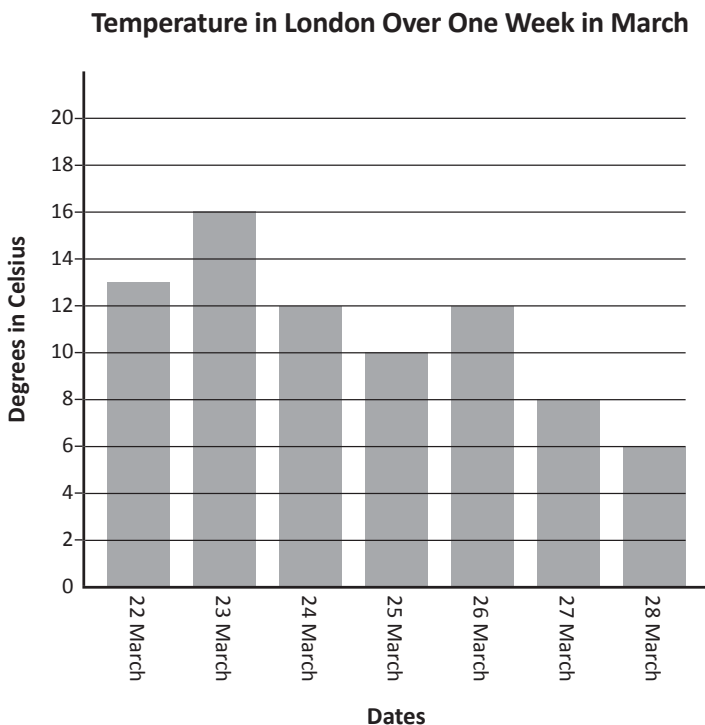
a Calculate the mean temperature for the week:

b If you were travelling to London for the week, what clothes would you pack?

Data Representation

Collecting and analyzing data – mean

6 You and a partner are going to record how many cubes land in a box. You will need 10 unifix cubes and an empty lunchbox.

1 Place the lunchbox 1 metre in front of you.

2 Sit on the floor.

3 Take turns throwing all 10 cubes at the same time.

4 Each record your results in the data table on the right.

5 Repeat the process 5 times.
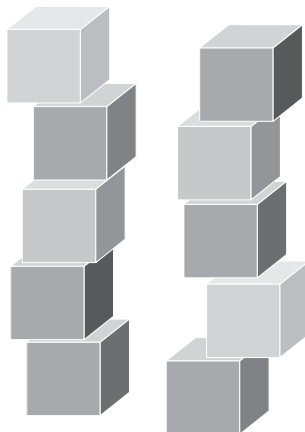
Throw	Tally
1	
2	
3	
4	
5	

7 Create a bar graph of your results. Label each axis.

Number of Cubes that Landed in the Box
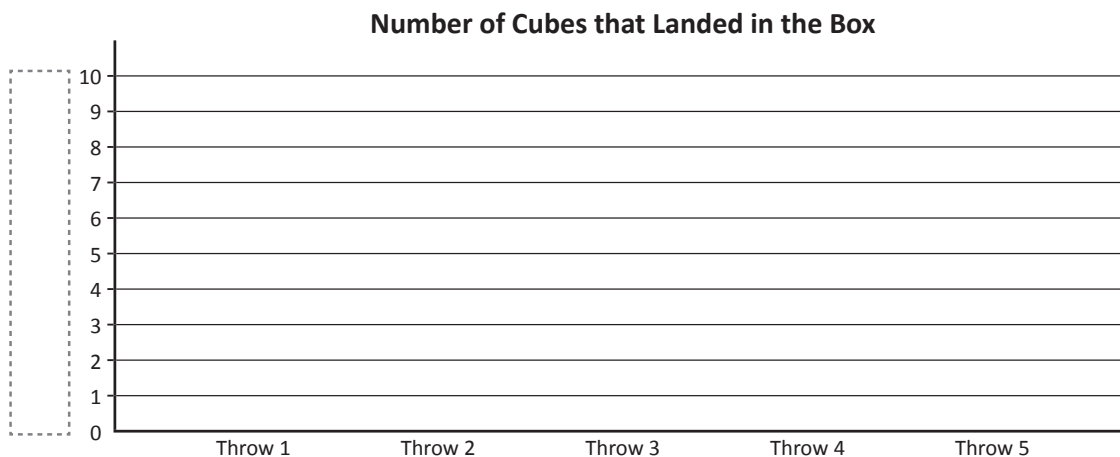
a What is your mean number of cubes that landed in the box?

b What was your partner's mean number of cubes that landed in the box?

c What was the mean of both sets of data together?

d Do you think the mean paints an accurate picture of the process?

Collecting and analyzing data – collecting data

1 **Study all the different types of graphs showing sales of hats. Match each graph to its main feature by completing the table below:**

Pictograph

Sales of Hats

Monday	🎩 🎩
Tuesday	🎩 🎩 🎩
Wednesday	🎩 🎩 🎩 🎩
Thursday	🎩 🎩

Key: 🎩 = 10 hats

Broken-line graph

Sales of Hats

Circle graph

Sales of Hats

Bar graph

Sales of Hats
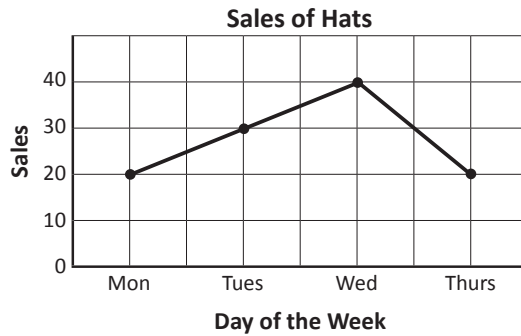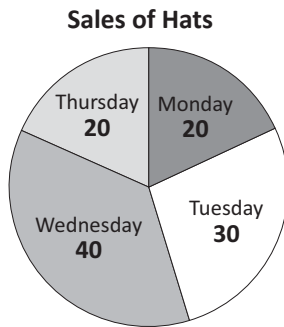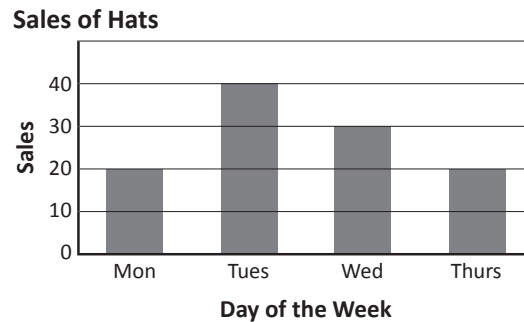
Main Feature	Name of Graph
Shows clearly how big each category is compared to the whole. Sometimes has a key and looks like a pie.	
Shows an exact amount in each category and allows you to compare categories.	
Shows numerical data using pictures. Has a key.	
Shows how data changes in relation to something – usually time.	

Data Representation

Collecting and analyzing data – collecting data

2 Here are 3 different sets of data. Read over each table of data and decide which is the most appropriate graph to use.

Graph 1

Name	Number of Books
Blair	8
Charlie	4
Amity	5
Nicky	12

Graph 2

Week	Height of Plant
1	2.5 cm
2	3 cm
3	5 cm
4	7.5 cm
5	9 cm
6	9.5 cm

Graph 3

Item	Profit
Hot food	$40
Soup	$30
Drinks	$20
Fruit	$10

Construct the graphs using the templates below. You must work out the scale, label the axes and remember a heading for each graph:

a Show how many books each person read over the holidays. It should be clear to see who read the most and who read the least.

b Show how much a plant has grown over 6 weeks. It should be clear to see where the biggest growth spurt was.

c Show what the $100 profit that the canteen made yesterday was made up of.

Getting ready
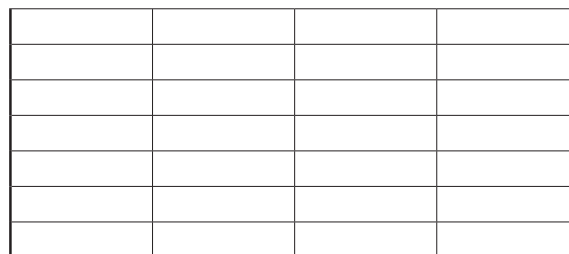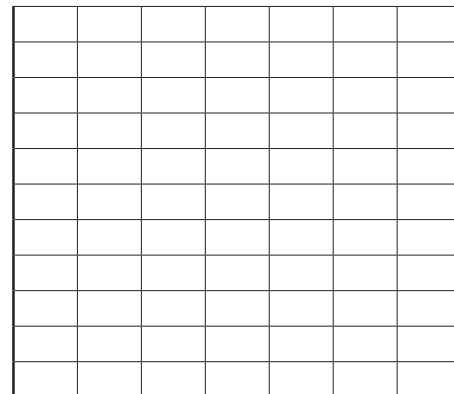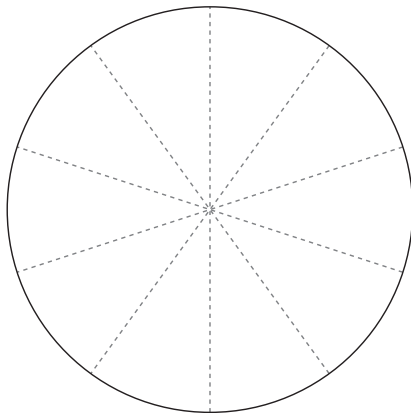
Many crimes are solved by grunt work. Detectives spend countless hours sifting through data. It can be one tiny fact that breaks a case open.

What to do

Read this next part very carefully. A bank was robbed during the month of May. Since it was the bank with all your savings, you have a vested interest in tracking down the offender.

An informant has told you that the crime was committed on the thief's birthday. They treated themselves to a shopping spree with your money! Apparently they crept in during a busy weekday and quietly cracked a safe.

The next three pages contain data about criminals in your area. Use the information to identify the thief and get your money back. You'll need to flick between graphs and clues to crack the case.

CLUE 1

MAY						
Sunday	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24 31	25	26	27	28	29	30

CLUE 2

Birthdays of Local Criminals

	EG										
	FF		SK	HC				MH			
	NK		EW	PJ		BJ	LM		CW		
DC	MC	BT	FC	BB		EK	DK	LL	RB		SM
J	F	M	A	M	J	J	A	S	O	N	D

More clues on page 25.

F **5**

SERIES   TOPIC

Data Representation

Whodunnit? solve

Birthdates by Gender

Males	Females
04.01.75	11.02.85
23.02.86	14.02.78
17.02.66	03.03.80
02.04.73	13.05.84
04.04.75	07.07.77
24.04.67	17.10.78
10.05.81	31.10.87
23.05.82	
18.07.81	
09.08.67	
18.08.63	
26.09.66	
13.10.72	
24.12.65	

CLUE 4

Gender Breakdown of Local Criminals

Female

Male
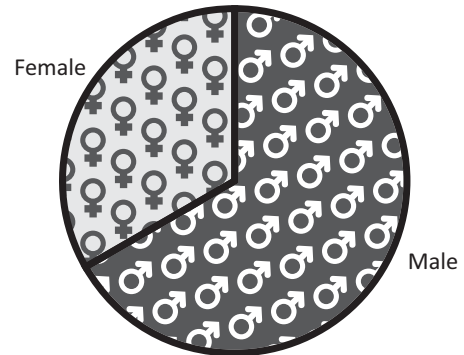
CLUE 5

Known Criminals

|	
Sam McNab	Earl Wyatt
Master Criminal	Frannie Fingers
Bobette Trimbole	Emma Getaway
Ned Kelly	Shifty Keys
Dan Kelly	Betty Balaclava
Ellen Kelly	Ron Biggs
Pretty-boy Jones	Buster Jones
Harry Cracker	Luke Moran
Mata Hari	Dan Cuffme
Light-fingered Larry	Carla Williams
Fred Capone	

> You should know who the criminal is by now!
>
> Use the following data to find out more about them.

DISCOVER

CLUE 6

Distinguishing Features

Tattoos — SM EG LL DC FF BB MC FC NK DK — Glasses — BT EK EW SK BJ RB MH

HC PJ CW LM

Facial Hair
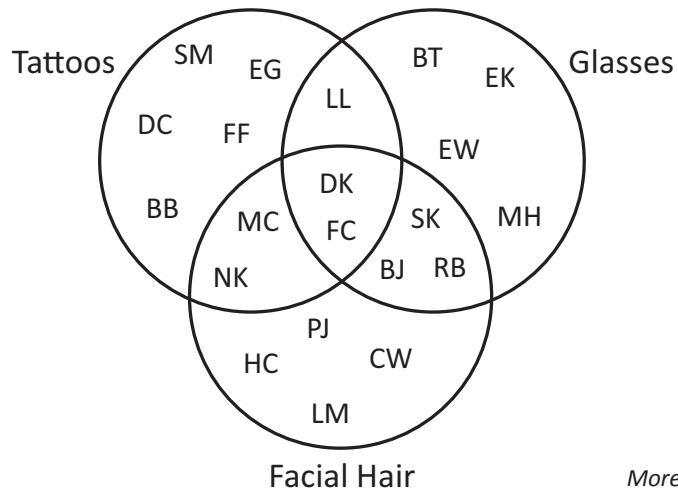
More clues on page 26.

CLUE 7

Hair Colour

SM DC	BB EK EW	FF MH DK FC CW BJ PJ	HC
BT	LL	RB MC NK LM SK EG	
black	blonde	brown	red

CLUE 8

Height of Known Criminals

	CW	PJ		
	BJ	EG	NK	LM
FF	FC	RB	MC	HC
EK	MH	DC	EW	DK
SM	BB	BT	SK	LL
150 - 159 cm	160 - 169 cm	170 - 179 cm	180 - 189 cm	190 - 199 cm

Height

Whodunnit? Give a name and a detailed description to the police superintendent:

What to do next

Create a WANTED poster for the guilty party.

F SERIES   5 TOPIC

Data Representation

Data disaster

create

You work for Fern Valley Healthy Snacks. In less than an hour, you're presenting the annual report to the Board.

They're keen to know yearly sales figures, best selling lines, the breakdown of monthly expenses and how each product sells compared to the others.

Your team has slaved to prepare the following data. However, someone didn't bother to add titles and labels to the graphs.

You don't have time to hunt the culprit. You have to fix this yourself. Fast!
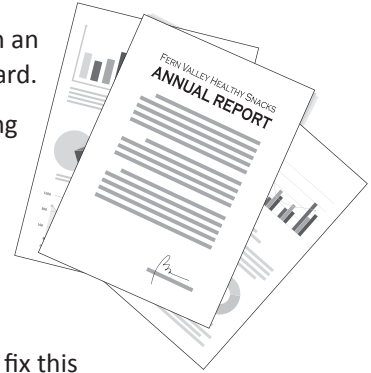
What to do

Look at the graphs below and come up with some believable information that would give each graph meaning and keep the Board happy. Think about which graph would best suit each set of data. They'll need titles, labels and numbers.
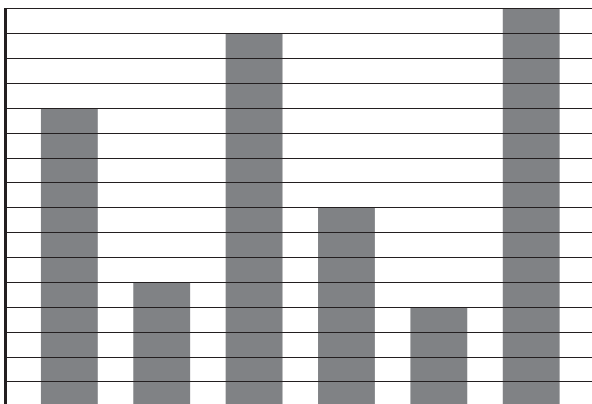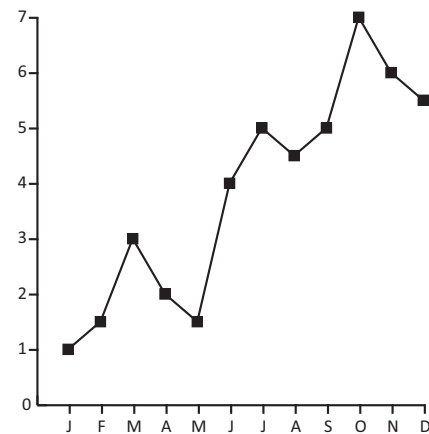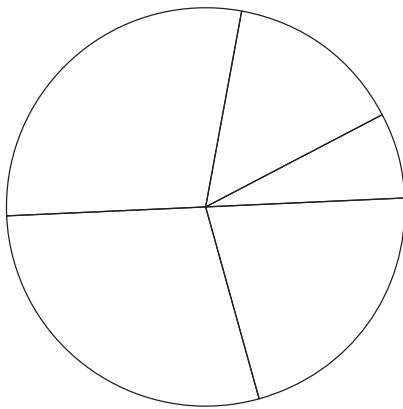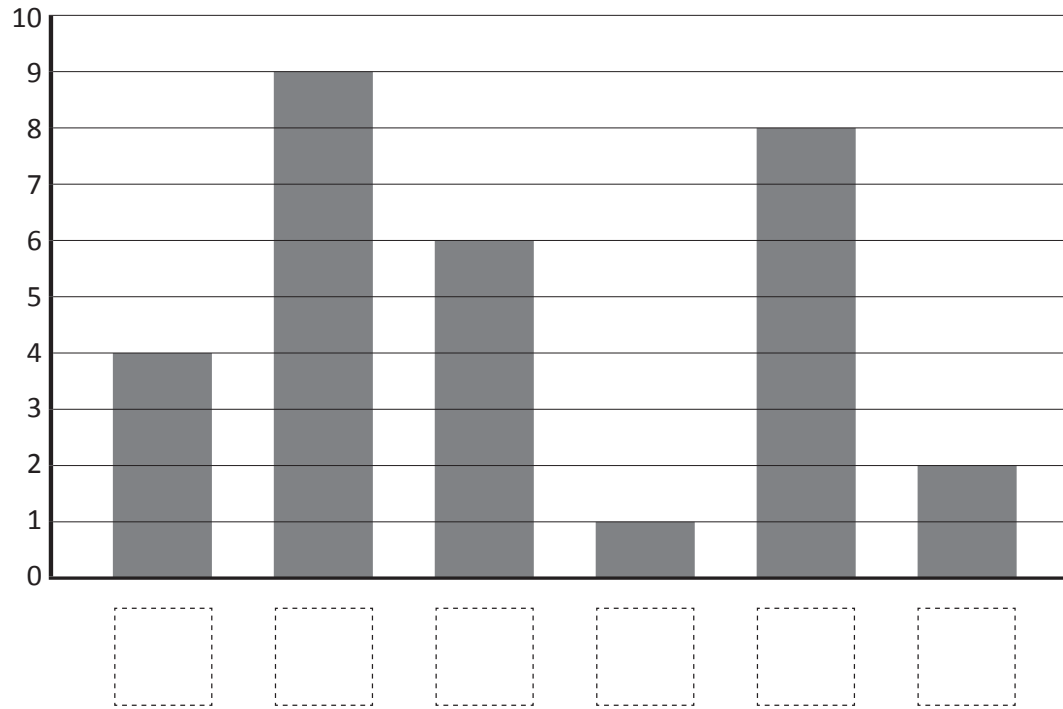
What to do → Follow the clues to correctly label each bar with the appropriate symbol:

5N's Preferred Holiday Activities

(Bar graph with y-axis from 0 to 10. Bars from left to right: 4, 9, 6, 1, 8, 2. Dashed label boxes below each bar.)

☐ Four times as many kids would rather go to the beach than go to an art gallery.

♡ A holiday at Wet 'n' Wild is the most preferred option.

◇ There are 3 times as many shoppers as there are art gallery attenders.

☆ Five fewer people like camping than Wet 'n' Wild.

△ Half the number of people who like camping prefer to visit art galleries.

◯ Poor Mr N will be bushwalking alone it seems. He'll probably get over it.

F SERIES **5 TOPIC**

Data Representation