

# Maths Revision & Practice Booklet

Name: \_\_\_\_\_



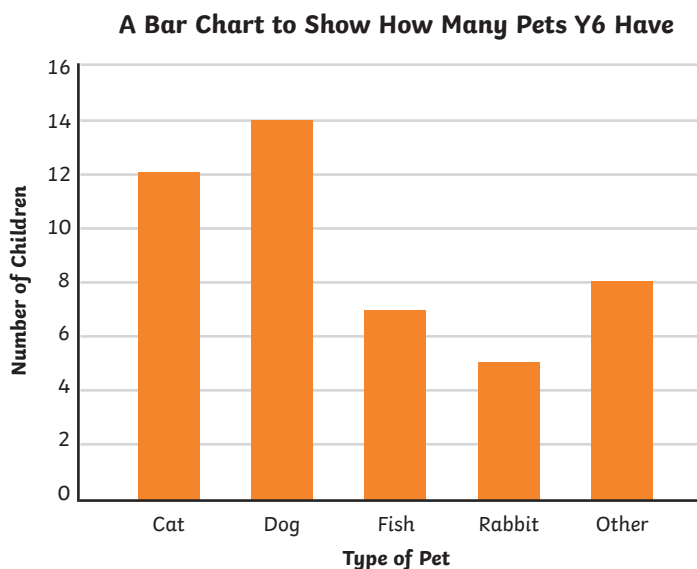
## Statistics

# Revise

## Interpret Data Presented in a Bar Chart

Data that is counted and has no in-between value is called discrete data. Discrete data is usually collected in a frequency table and then presented as a bar chart.

Pet	Number of Children
Cat	12
Dog	14
Fish	7
Rabbit	5
Other	8



- A bar chart has a horizontal axis and a vertical axis.
- A bar chart must always have a title explaining what it shows.
- Bars must be carefully drawn to show the data.
- There must be a gap between each bar.
- Each bar must be the same width.



A number line is marked on one of the axis. The scale of this number line is chosen based on the data range.

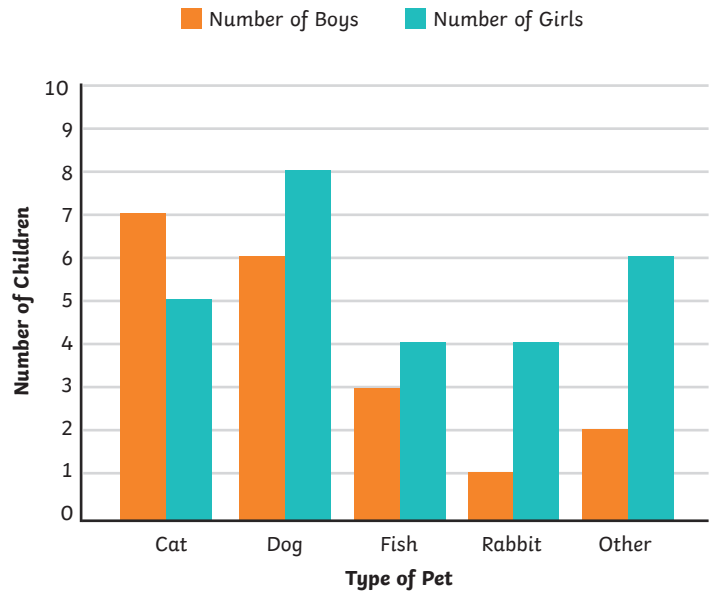
The data categories are organised on the other axis. Each axis must have a label explaining what it shows.

# Revise

Discrete data in each category can also be represented in subcategories. In this bar chart, each category has more than one bar. A key is used to identify the subcategories of the data.

Pet	Number of Boys	Number of Girls
Cat	7	5
Dog	6	8
Fish	3	4
Rabbit	1	4
Other	2	6

A Bar Chart to Show How Many Pets Y6 Have

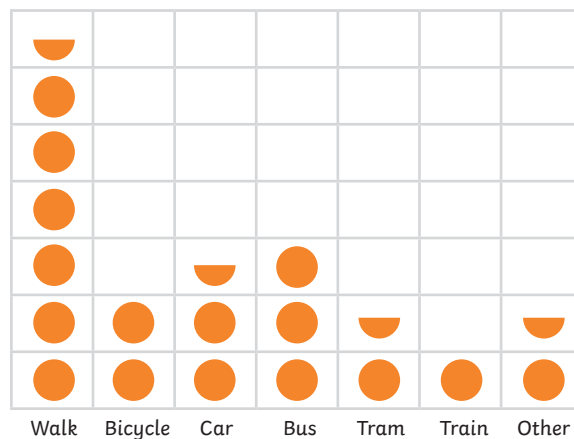



## Interpret Data Presented in a Pictogram

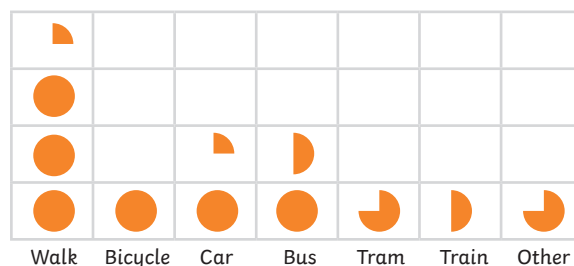
A pictogram uses pictures or symbols to represent discrete data. A key shows the value represented by one picture or symbol. It is important to identify the value of the whole picture or symbol in a pictogram, as part symbols are often used to show different values.


In both pictograms, the data is the same, but the value of the symbol is different.

A Pictogram to Show How the Children of Class 4 Travel to School



Key:  
  
 = 2 children



Key:  
  
 = 4 children

# Revise

## Complete, Read and Interpret Information in Timetables

A timetable shows a list of chronologically ordered events and can be used to compare the timings of different actions. Timetables vary in appearance, but often include start times and finish times and they can be used to calculate time durations. Timetables are commonly used for bus and train times, cinema times, TV guides and sports events.

Times are usually shown on timetables in the digital, 24-hour clock.

To convert afternoon and evening 24-hour time to 12-hour time, remember to subtract 12 hours.



### Long Lane >> Church Road

	Bus 25	Bus 28	Bus 34	Bus 39
Police Station	14:44	15:09	15:34	15:59
Bank	14:50	15:15	15:40	16:05
Cinema	14:58	15:23	15:48	16:13
Car Park	15:03	15:28	15:53	16:18
Sporting Store	15:05	15:40	15:55	16:20
Church Road	15:25	15:50	16:15	16:40

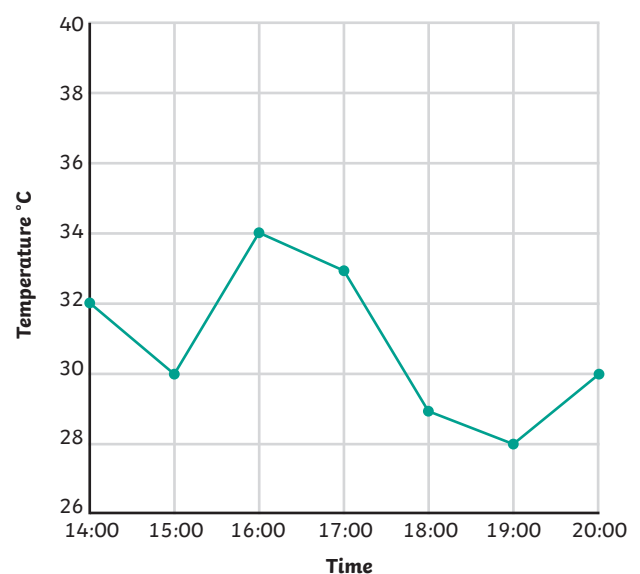
## Solve Comparison, Sum and Difference Problems Using Information Presented in a Line Graph

Line graphs are used to show changes to a measurement over time. They show continuous data.

The data being measured is shown on the vertical axis. The time the data is being measured over is shown on the horizontal axis.

Data is plotted on to a line graph in the same way as a coordinate grid. These data plots are then joined with straight lines. We can use the line of the graph to describe general trends in the change of the measurement over time, or to find precise measurements at a given time.

A Line Graph to Show the Temperature of the Classroom



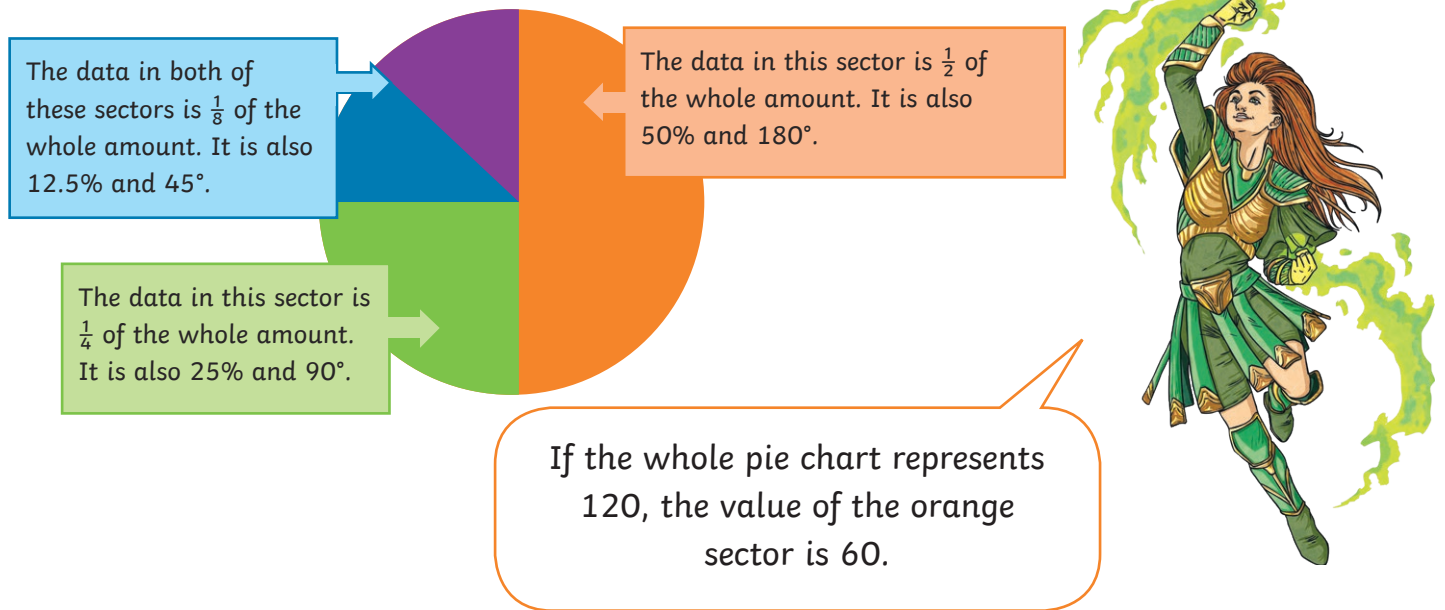
# Revise

## Interpret Pie Charts and Use Them to Solve Problems

Pie charts show discrete data as proportional sectors of a circle.

Every sector of a pie chart is a proportion of the whole. You can explain what each sector represents using an angle, fraction or percentage.

Being able to convert between fractions, percentages and angles is a key skill for answering questions about data presented in a pie chart.



## Calculate and Interpret the Mean as an Average

Finding the mean involves calculating the average value of a set of data. We find the mean by adding together all the values in the set of data and dividing this total by the number of values there are. The mean will not always be a whole number.

Day	Monday	Tuesday	Wednesday	Thursday	Friday
Number of children having packed lunch	13	24	16	30	20

To find the average number of children having packed lunches, we first add up all the values:

$$13 + 24 + 16 + 30 + 20 = \mathbf{103}$$

Then, we divide this total by the number of values in the set of data:

$$103 \div 5 = \mathbf{20.6}$$

We can round this answer to be appropriate to the context, so the average number of children having packed lunches is **21**.





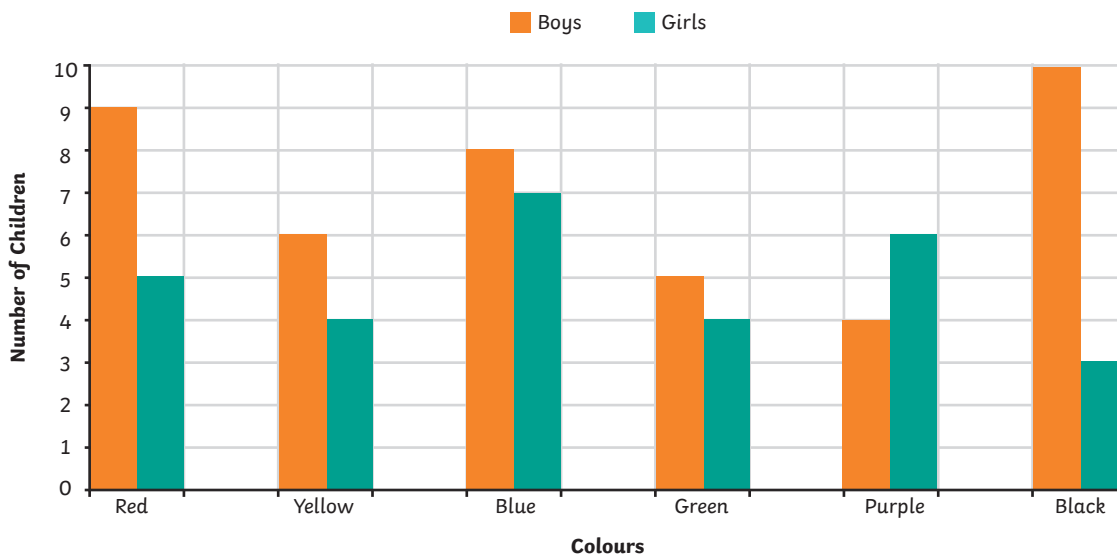
# Practise

Supercharge your powers by answering these questions.



- I ask the children in year 6 to vote for their favourite colour. This bar chart shows the results.

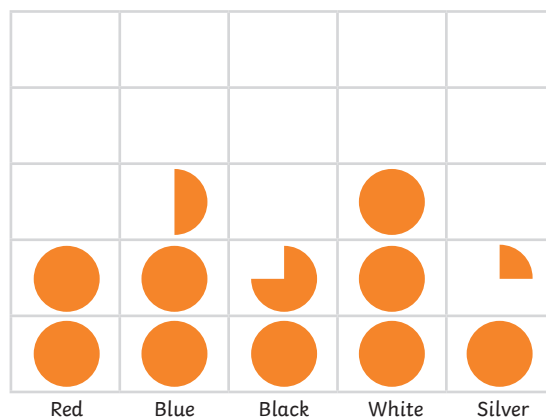
**A Grouped Bar Chart to Show Favourite Colours**



How many more boys voted for black than girls?

boys

- This pictogram shows how many cars were sold in a month.



Key:



= 80 cars

How many black cars and silver cars were sold in total?

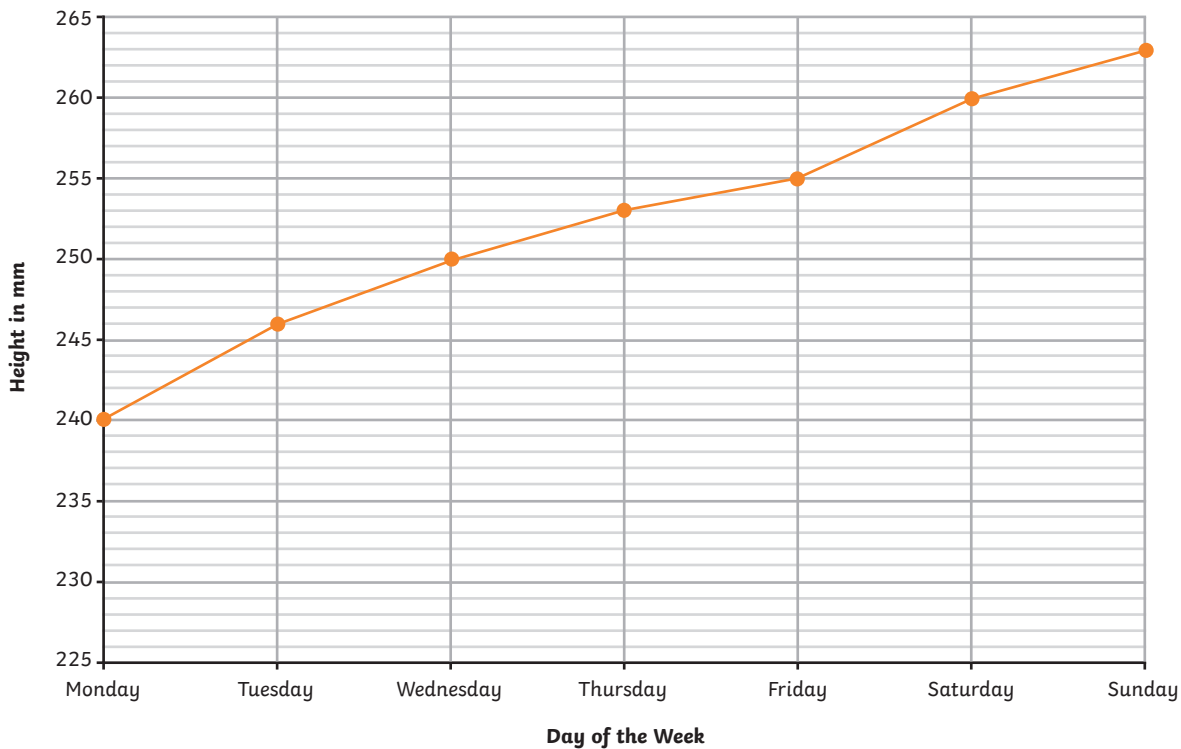
cars

## Practise

3. I need to arrive in Dubingham by 3:00 p.m.  
Circle the latest time that I can leave Winford to arrive on time.

Winford	13:35	13:55	14:15	14:35
Inkley	13:45	14:05	14:25	14:45
Carford	14:03	14:23	14:43	15:03
Dubingham	14:27	14:47	15:07	15:27
Yarnstown	14:33	14:53	15:33	15:53

4. I measure the height of my sunflower everyday for one week. This line graph shows the results.



By how many centimetres did the sunflower grow from Wednesday to Saturday?

 cm

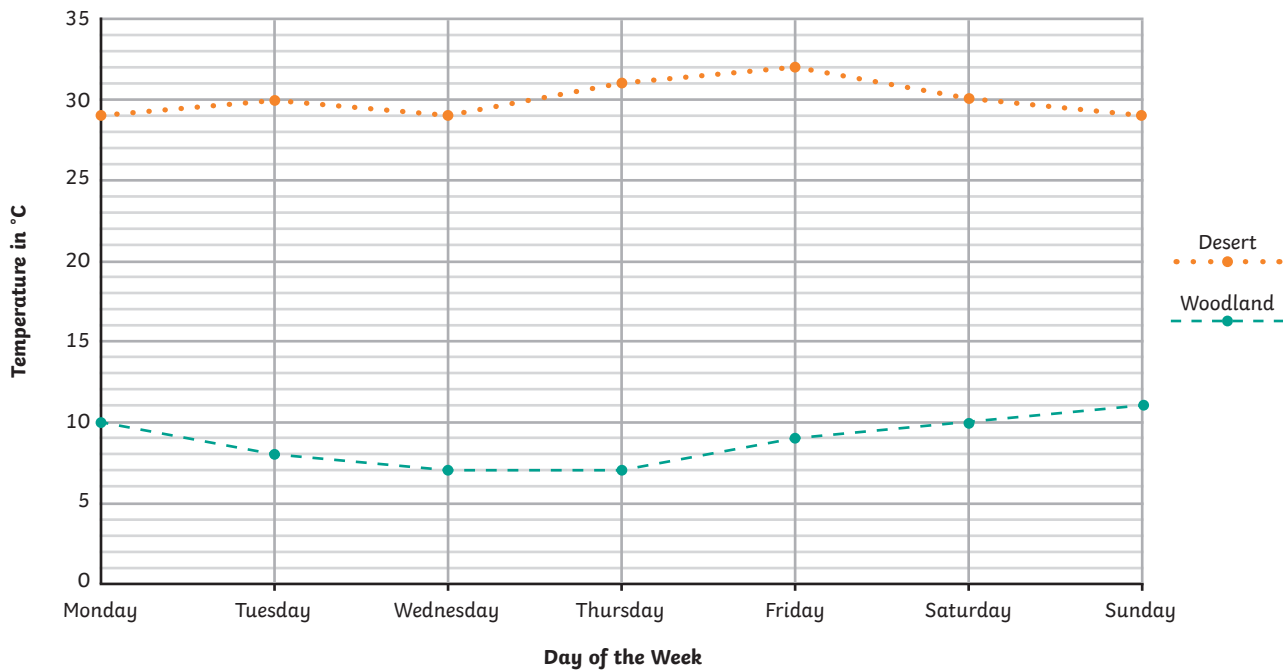
1 mark



total for this page

# Practise

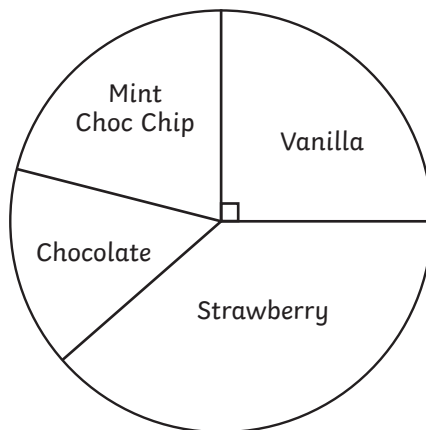
5. This line graph shows the temperature of a desert and a woodland over seven days.



By how many degrees was the desert warmer than the woodland on Thursday?

°C

6. I asked 32 children to vote for their favourite flavour of ice cream.



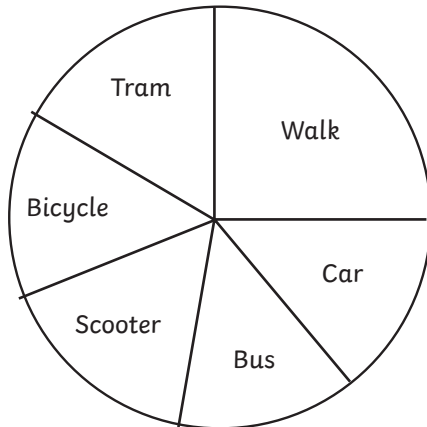
Tick the statements that are true.

One-third of the children voted for vanilla.		Less than 16 children voted for strawberry.	
8 children voted for vanilla.		The total number of votes for chocolate and mint is more than 16.	



## Practise

7. I survey a large group of children to find out how they travel to school. This pie chart shows the results.



680 children walk to school.

The number of children for all the other types of transport is **equal**.

How many children travel to school by car?

Show  
your  
method

children

8. Last year, I went to seven concerts. Here are the prices I paid for each ticket.

£24

£32

£50

£30

£22

£44

£40

What was the mean cost of the tickets to the nearest whole pound?

Show  
your  
method

£

1 mark



1 mark



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this page



# Self-Assessment

Colour in the superhero strength-o-meter to show how you feel about each of these statements:

Interpret data presented in a bar chart.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interpret data presented in a pictogram.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Complete, read and interpret information in timetables.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Solve comparison, sum and difference problems using information presented in a line graph.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interpret pie charts and use them to solve problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calculate and interpret the mean as an average.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments