

Year 6



Mathematics

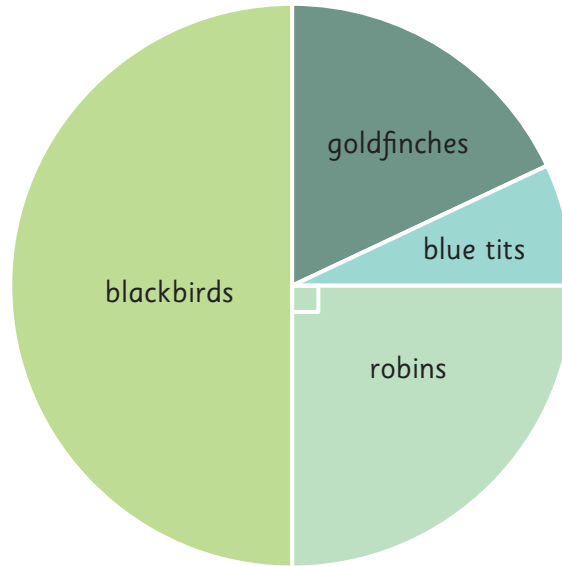
Reasoning - statistics

Pie charts

First name						
Middle name						
Last name						
Date of birth	Day		Month		Year	
School name						

1

This pie chart shows the birds Inaya saw in her garden.



She saw 56 birds altogether.

Work out exactly how many robins and blackbirds Inaya saw.

robins:

blackbirds:



1 mark

Estimate how many blue tits and goldfinches Inaya saw.

blue tits:

goldfinches:



1 mark

Explain your answer.

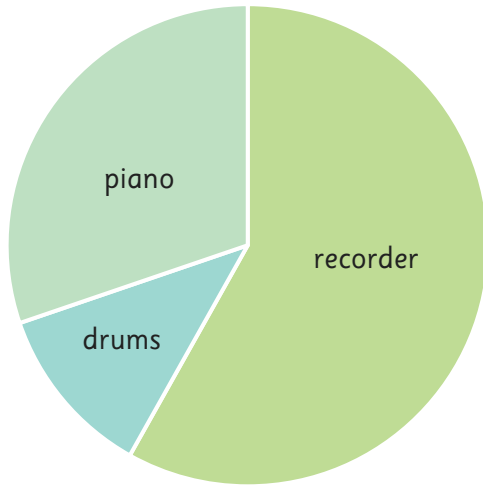


1 mark

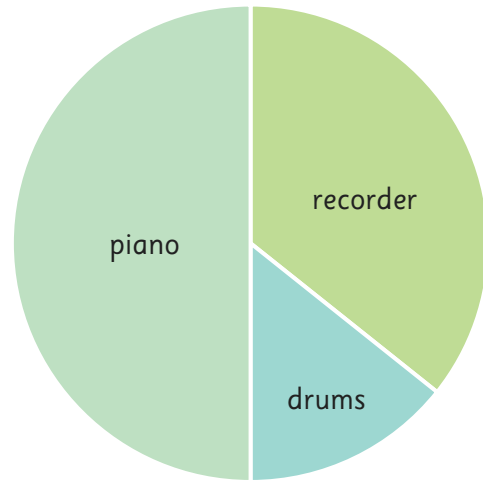
2

20 children in Year 6 and 10 children in Year 5 are asked which musical instrument they play.

These two pie charts show the results.



Year 6



Year 5

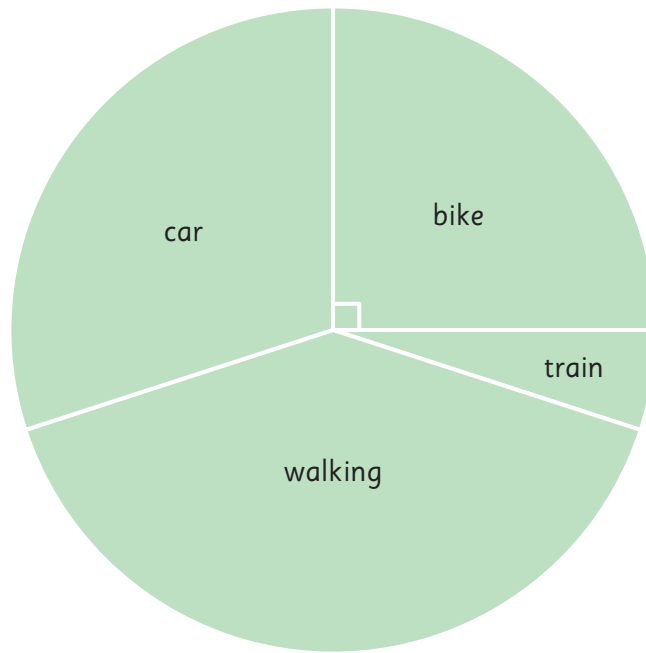
Did more children in Year 6 or Year 5 play the piano? Explain how you know.



1 mark

3

This chart shows which mode of transport children use to travel to school.



Altogether, **96** children were included in the survey.

Tick all the statements that are **true**.

Exactly 24 children travel by bike.

Approximately 20 children travel by car.

More children walk than travel by car.

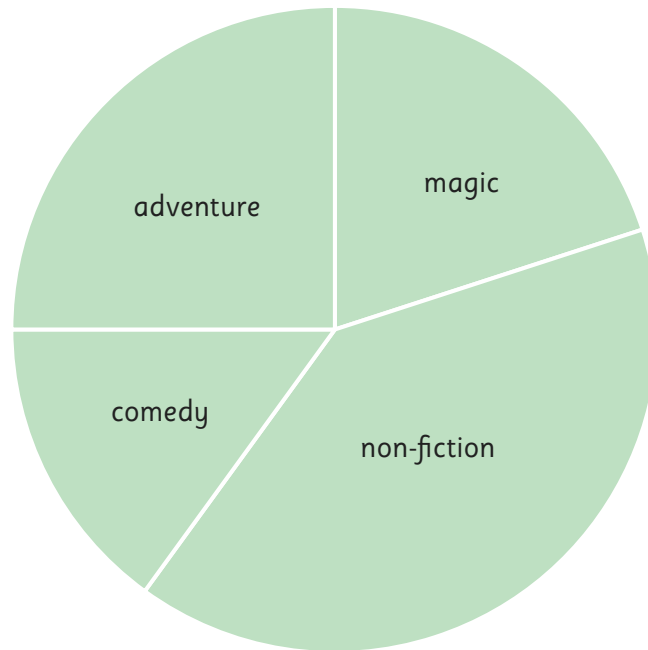
Fewer than 24 children take the train.

2 marks

4

Abdul does a survey of the genres of books in the class library.

This pie chart shows his results.



Estimate the **fraction** of books that are about magic.

1 mark

Abdul counted 20 adventure books.

Estimate how many **non-fiction** books he counted.

1 mark

5

James and Sarah visit the zoo.

They each make a pie chart to show how many of each animal they saw.



Total animals seen: 20



Total animals seen: 48

Estimate the number of **lions** that **James** saw.

1 mark

Who saw more **elephants**? Circle your answer.

James / Sarah

1 mark

Explain how you know.

1 mark

6

This pie chart shows the species of trees in a park.



Altogether there are **120** trees.

Tick all the statements that are **true**.

There are the same number of oak trees as beech trees.

There are exactly 60 elm trees.

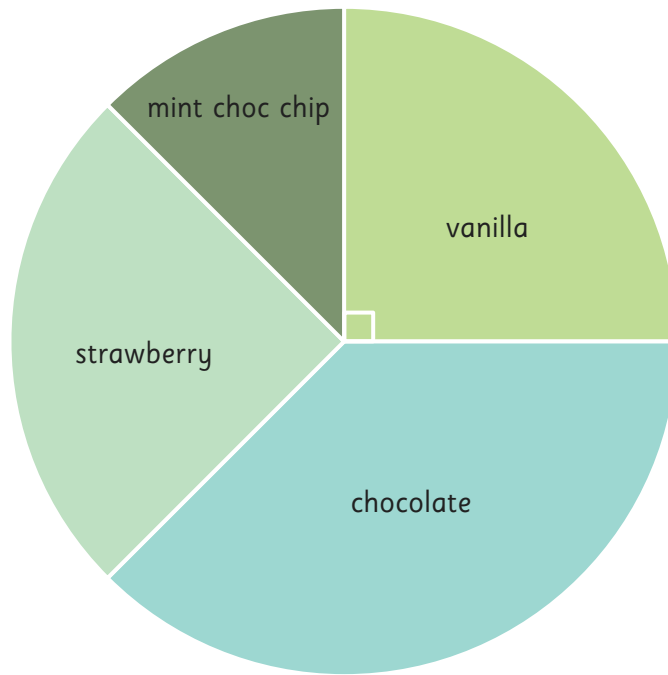
There are exactly 20 willow trees.

There are twice as many elm trees as willow trees.

2 marks

8

This pie chart shows Oak School's favourite ice-cream flavours.



Exactly **50** children chose vanilla.

Estimate how many children chose **chocolate**.

1 mark

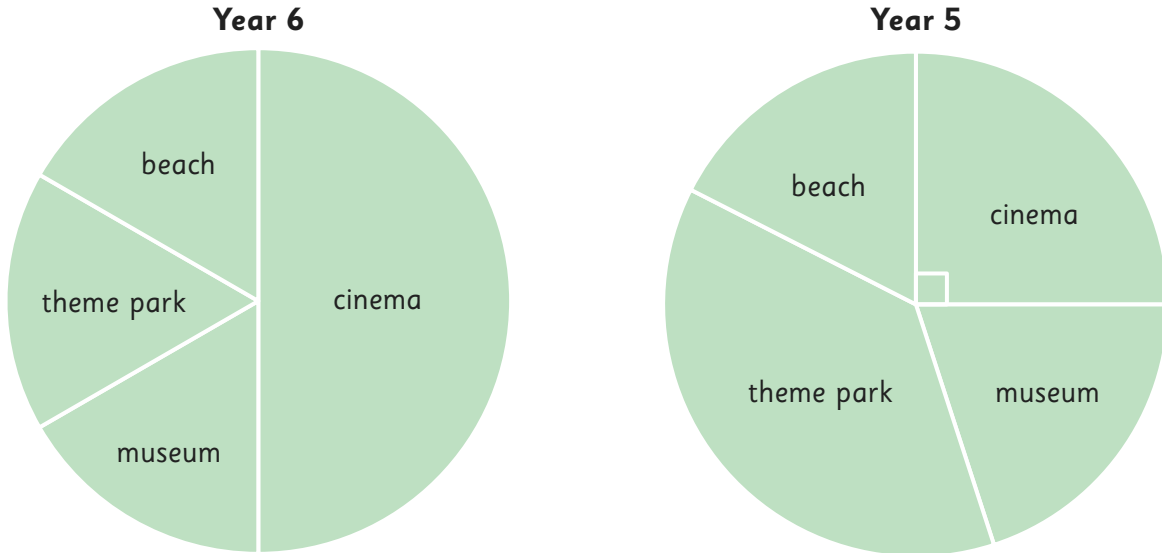
Explain your answer.

1 mark

9

Children in Year 6 and Year 5 were asked what their favourite school trip was that year.

There are **60** children in Year 5.



The **same** number of children in Year 6 and Year 5 chose the **cinema**.

How many children are there in Year 6?

1 mark

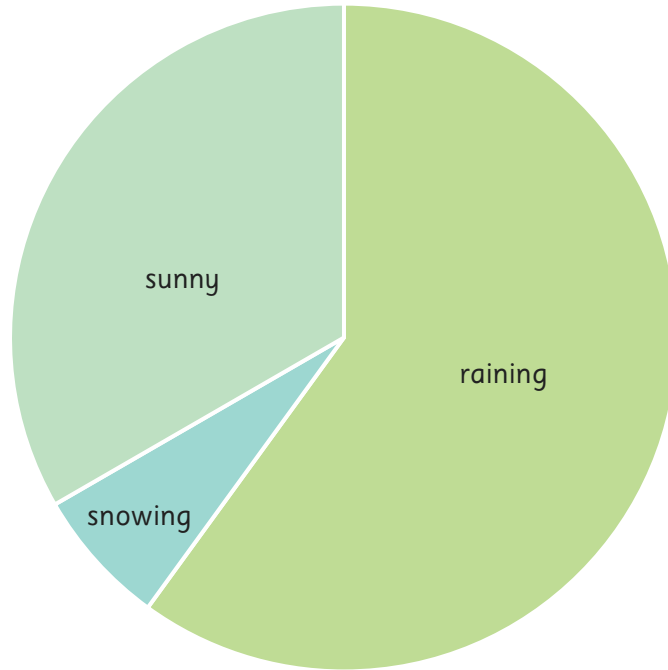
The same number of children in Year 6 chose the beach, the theme park and the museum.

How many children in Year 6 chose **the beach**?

1 mark

10

James makes a pie chart to show how many days of it was sunny, raining and snowing in November.



Estimate the **fraction** of days that it was sunny.

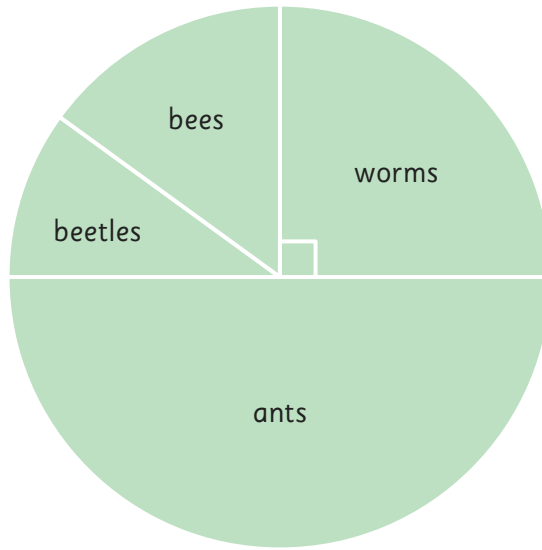
1 mark

How many days was it sunny in November? Explain your answer.

1 mark

11

Amy makes a pie chart to show the number of different bugs she found in her garden.



In total, she found **60** bugs.

Work out exactly how many worms and ants Amy found.

worms:

ants:



1 mark

Estimate how many beetles and bees Amy found.

beetles:

bees:



1 mark

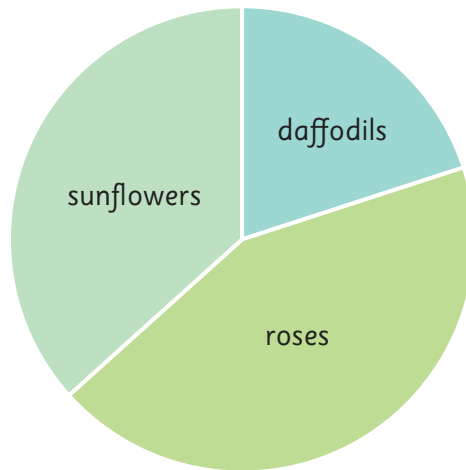
Explain your answer.



1 mark

12

Inaya makes a pie chart showing the different flowers in her garden.



Complete the table to work out the size of each angle on the pie chart.

	Number of flowers	Size of angle on pie chart
Daffodils	6	°
Roses	13	°
Sunflowers	11	°



1 mark

Amy plants 6 more sunflowers in her garden.

Calculate the size of the segment for **sunflowers** on the new pie chart.

Show your method																				
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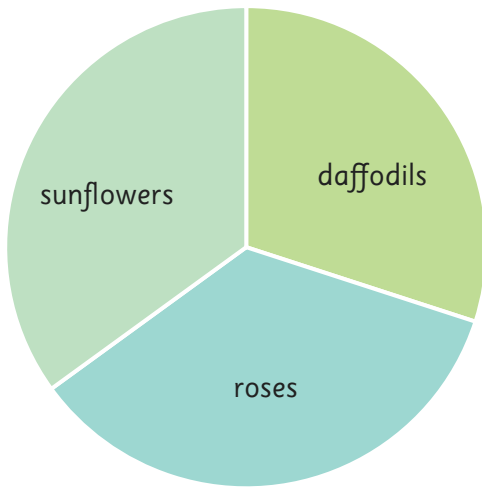


2 marks

13

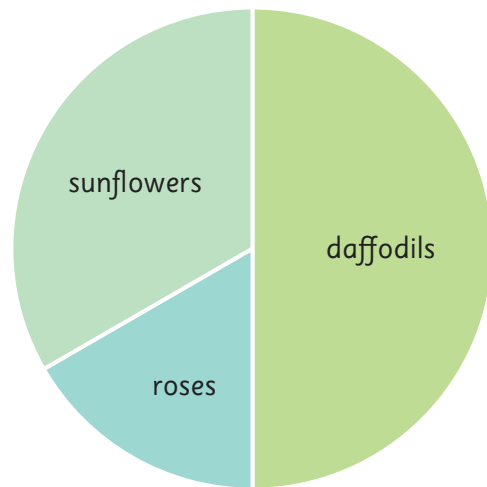
Two flower shops are comparing their flower sales from last week.

Magnificent Flowers



Total flowers sold: 120

Flowers in Bloom



Total flowers sold: 60

Who sold more **daffodils** Explain your answer.



2 marks

Flowers in Bloom sold twice as many sunflowers as they sold roses.

How many **sunflowers** did Flowers in Bloom sell?

Show your method																														



2 marks

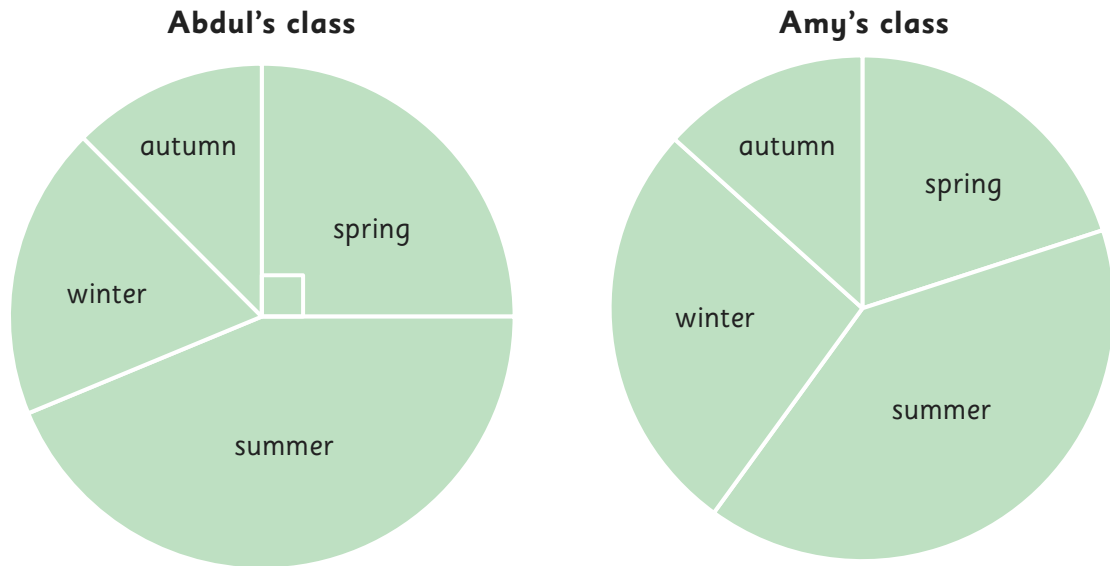
14

Abdul makes a pie chart to show his class's favourite season.

Amy does the same.

Here are their results.

There are **24** children in Abdul's class.



The **same** number of children in Abdul's class and Amy's class chose **spring**.

How many children were in Amy's class?

1 mark

The same number of children in Amy's class chose summer, as chose autumn and winter combined.

How many children in Amy's class chose **summer**?

1 mark

15

Inaya makes a pie chart to show the different flavours of cookies at a bake sale.



There were 80 cookies in total.

Estimate how many **chocolate chip** cookies there are.

1 mark

Explain your answer.

1 mark