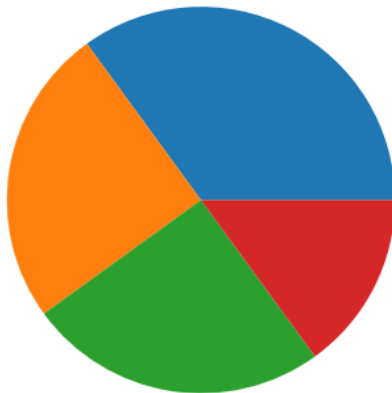


LO: To read and interpret pie charts

we
do

What is a pie chart?
What data might they show?



What is a pie chart?

I
do

A pie chart is a type of graph that illustrates how different types of data fit into a whole.

Pie charts are a great way to visually represent percentages or proportional data.

What sort of data is it used for?

Pie Charts show proportional data.

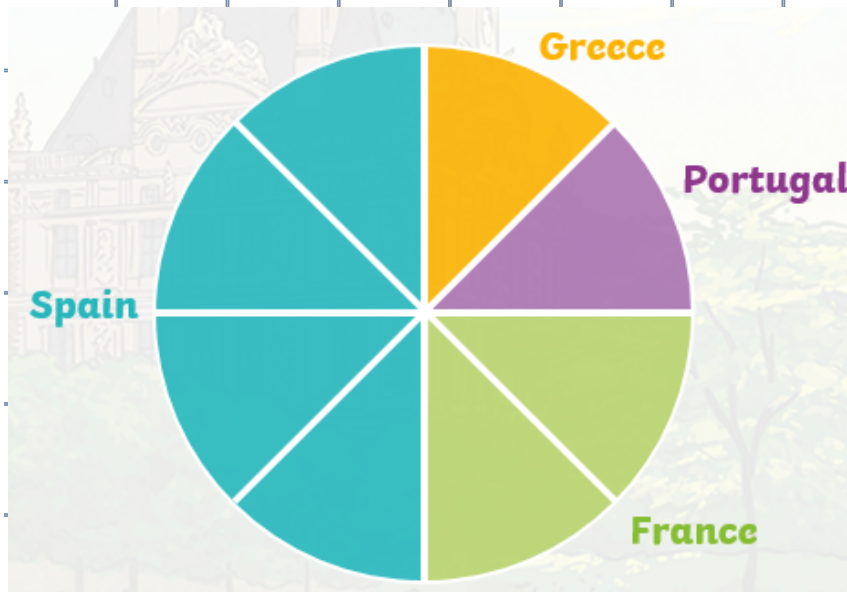
The whole circle is equal to all the pieces of data, or 100%.

It could be used to show population, favourite subjects or how children travel to school.

This pie chart shows the holiday destinations for 480 people.

I
do

we
do



How many people went to France on holiday?

What fraction of the people chose to go to Spain and Portugal?

How many more people went to Spain than Greece?

$$\text{Spain} = 480 \div 2 = 240$$

$$\text{France} = 60 \times 2 = 120$$

$$\text{Greece} = 60$$

$$\text{Portugal} = 60$$

I
do

we
do

A Netball team played 42 games and a Cricket team played 24 games in a season.
Their results are shown in these pie charts:

Look at the statements and explain if you agree or disagree with each child.

Cricket

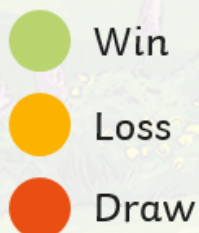


Netball



Looking at the pie charts, it seems like both teams won the same number of games.

Henry

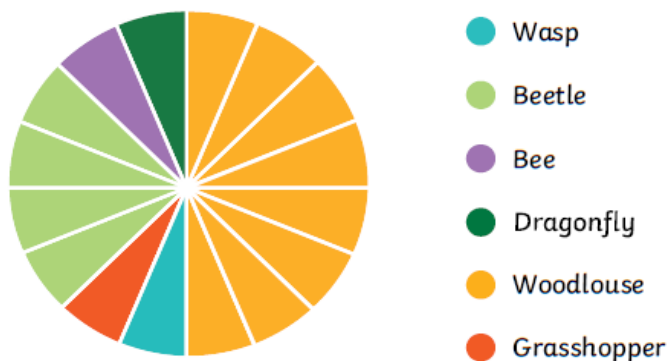


Henry is incorrect. The netball team has won half of their games (21 games won) and the cricket team has won half of their games (12 games won). The netball team has therefore won more games than the cricket team because they played a greater number of games.

you
do

Complete in books.

- 1) This pie chart shows the numbers of different insects that were found in a back garden.



Answer the following questions, showing your working out.

- a) If the number of dragonflies found in the garden was 3, how many insects were found in the garden altogether?
- b) How many more beetles were found than grasshoppers?
- c) The woodlice that were found were either black or brown. $\frac{1}{4}$ were black. How many brown woodlice were found?
- d) The next day the total number of insects found was the same. 18 of these insects were now bees. What fraction of the chart would be bees?

- 2) These pie charts show the different types of transport children use to travel to school.

Year 5

Transport to School



Walk Bike Car

Year 6

Transport to School



Use these facts to help you answer the following questions:

30 children walk to school in year 5.

12 children bike to school in year 6.

- a) What is the difference between the numbers of children who walk to school in year 5 and year 6?
- b) What is the difference between the numbers of children who bike to school in year 5 and year 6?
- c) Compare the fraction of children and number of children who travel by car in year 5 and year 6.

we
do

Pink Highlighter ready.....let's mark!



1) a) $3 \times 16 = 48$

48 insects were found altogether.

b) $4 \times 3 = 12$

$12 - 3 = 9$

9 more beetles were found.

c) $48 \div 2 = 24$

$24 \div 4 = 6$

$6 \times 3 = 18$

There were 18 brown woodlice.

d) $18 \div 3 = 6$

$\frac{6}{16}$ or $\frac{3}{8}$ of the pie chart would be bees.

2) a) $12 \times 4 = 48$

$48 - 30 = 18$

18 more children in year 6 walk to school than children in year 5.

b) $15 - 12 = 3$

3 more children bike to school in year 5 than year 6.

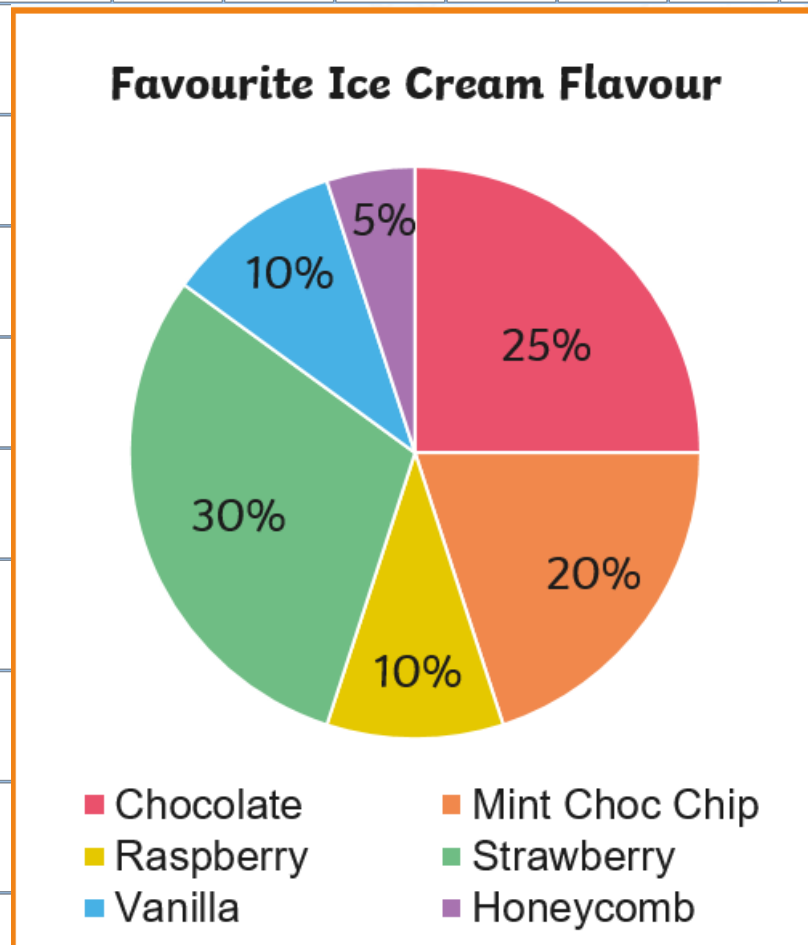
c) $\frac{1}{2}$ of the children in year 5 travel by car; this is 45 children. Only $\frac{1}{6}$ of the children in year 6 travel by car; this is 12 children.

300 children were asked to choose their favourite ice cream flavour.

I do

we do

This pie chart shows the results:



How many children chose chocolate as their favourite flavour?

75

How many more children chose strawberry than raspberry as their favourite flavour?

60

How many children in total chose either mint choc chip, vanilla or honeycomb as their favourite flavour?

105

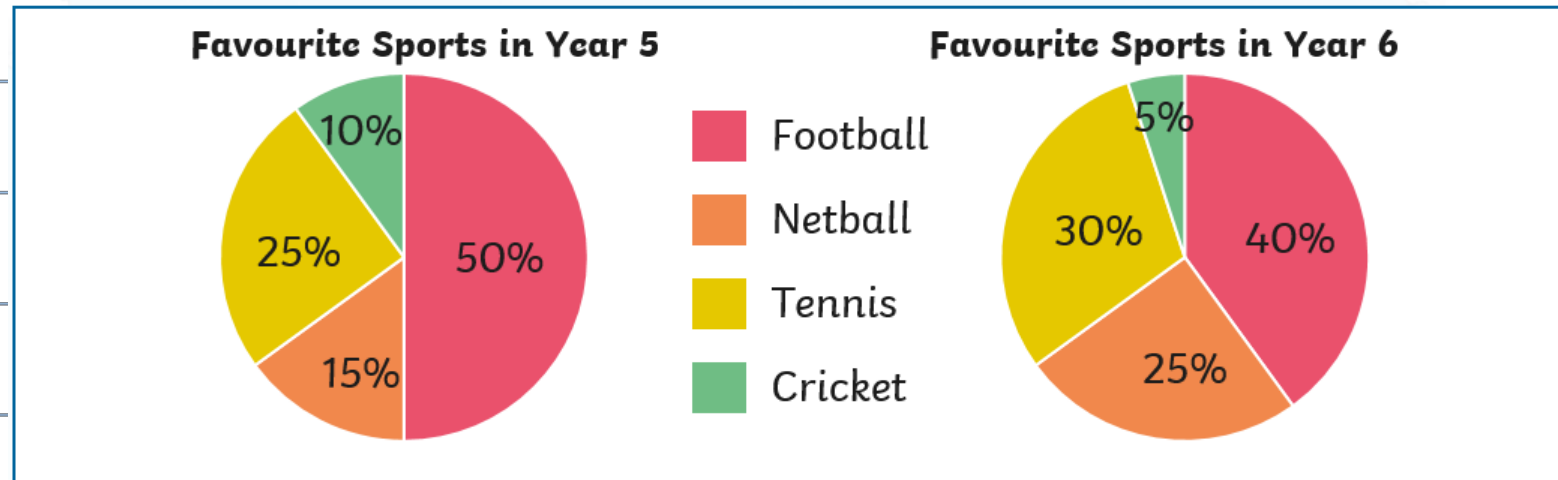
What percentage of children chose raspberry and chocolate altogether?

35%

140 year 5 children and 160 year 6 children were asked to name their favourite sports. The results are shown in these pie charts:

I
do

we
do



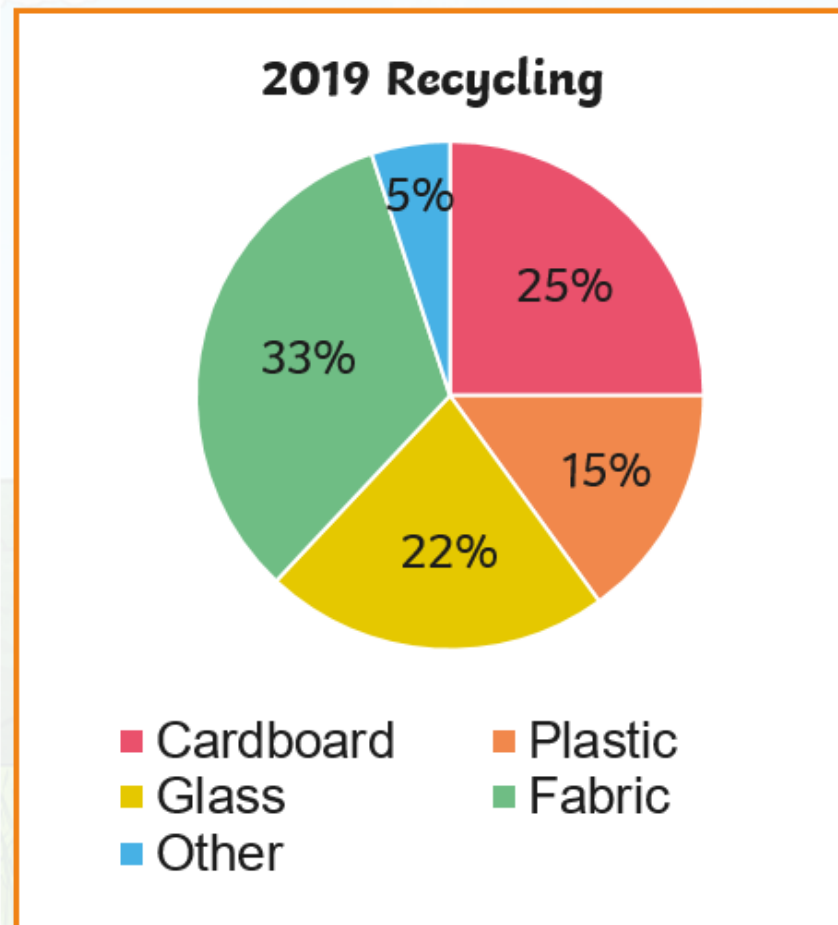
Explain whether or not you agree with each of these statements about the pie charts, giving reasons.

- The number of children in year 5 who chose tennis as their favourite sport is equal to the number of children in year 6.
- Twice as many children in year 5 chose cricket as did in year 6.
- 10 more children chose football in year 5 than in year 6.

I
do

we
do

This pie chart shows the different percentages of recycled materials that were collected in 2019:



If 250 tonnes of recycling was 'other' materials, how many tonnes of recycling were collected in total during 2019?

Calculate the quantities collected of the following materials:

cardboard

plastic

glass

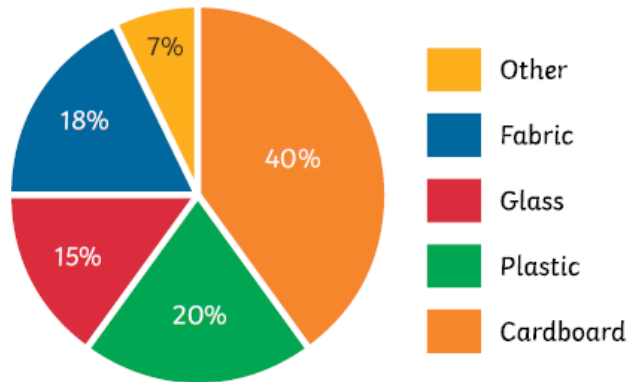
fabric

you
do

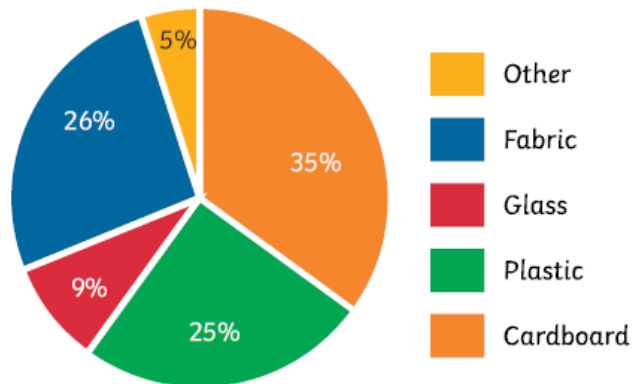
Complete in books.

These pie charts show the different percentages of recycled materials that were collected in two years:

2017 Recycling



2018 Recycling



- 1) If 200 tonnes of recycling in 2018 was 'other' materials, how many tonnes of recycling were collected in total that year?
- 2) If 3000 tonnes of recycling was collected in total during 2017, calculate the quantities collected of the following materials:
 - a) cardboard
 - b) plastic
 - c) glass
 - d) fabric
 - e) other
- 3) Compare the two pie charts to answer the following questions.
 - a) In which year was the larger quantity of cardboard collected? By how many tonnes was it larger?
 - b) In which year was the larger quantity of glass collected? By how many tonnes was it larger?
 - c) Which material saw the greatest difference in the quantity that was collected between the two years?
 - d) In 2016, the total quantity of recycling collected was 15% lower than 2017. How many tonnes of recycling was collected in 2016?
- 4) Write your own questions comparing the two pie charts.

we
do

Pink Highlighter ready.....let's mark!

1) 4000 tonnes

2) a) 1200 tonnes

b) 600 tonnes

c) 450 tonnes

d) 540 tonnes

e) 210 tonnes

3) a) 2018 by 200 tonnes

b) 2017 by 90 tonnes

c) 500 tonnes more fabric was recycled in 2018 compared to 2017.

d) 2550 tonnes

4) Answers will vary.