1) a) 280

b) $\frac{1}{8}$

c) 70 more people went to France

2) a) 40

b) 40

c) $\frac{3}{8}$

3) a) glass = 75kg
plastic = 50kg
clothing = 25kg

b) Multiple answers possible, for example:
How much more cardboard was recycled than plastic?

1) a) This is true. 160 children were asked and $\frac{1}{8}$ of those children said music was their favourite subject. $\frac{1}{8}$ of 160 = 20

b) This is false. 80 children chose PE and 20 children chose history. Therefore, 60 more children chose PE than history.

c) This is false. $\frac{1}{8}$ of the children chose History as their favourite subject.

d) This is false. The pie chart does not give any specific information about the children and shows that 40 children chose art, not 42.

2) Jack is incorrect. The Football team has won half of their games (18 games won) and the rugby team has won half of their games (24 games won). The rugby team has therefore won more games than the football team as they had a greater number of games.

Ruby is incorrect. Although the loss section looks larger for the football team, they have played less games than the rugby team. Their losses are actually equal as both teams have lost 12 games.

3) Football
Win: 18
Loss: 12
Draw: 6

Rugby
Win: 24
Loss: 12
Draw: 12

1) a) 3 × 16 = 48
48 insects were found altogether.

b) 4 × 3 =12
12 - 3 = 9
9 more beetles were found.

c) 48 ÷ 2 = 24
24 ÷ 4 = 6
6 × 3 = 18
There were 18 brown woodlice.

d) 18 ÷ 3 = 6
$\frac{6}{16}$ or $\frac{3}{8}$ of the pie chart would be bees.

2) a) 12 × 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.

1) This pie chart shows the holiday destinations for 560 people.

a) How many people went to Spain on holiday?

_____

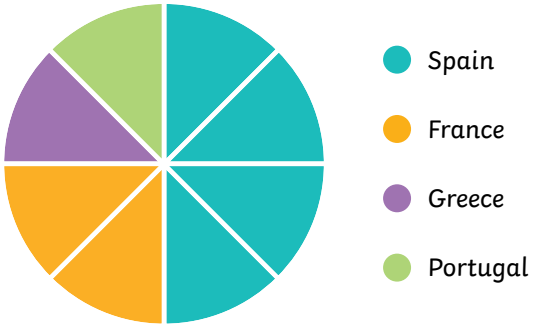
b) What fraction of the people chose to go to Greece?

_____

c) How many more people went to France than Portugal?

_____

Holiday Destinations



2) This pie chart shows the results when 160 people were asked to name their favourite fruit.

a) How many people altogether chose pears and oranges as their favourite fruit?

_____

b) How many more people chose apples than mangoes as their favourite fruit?

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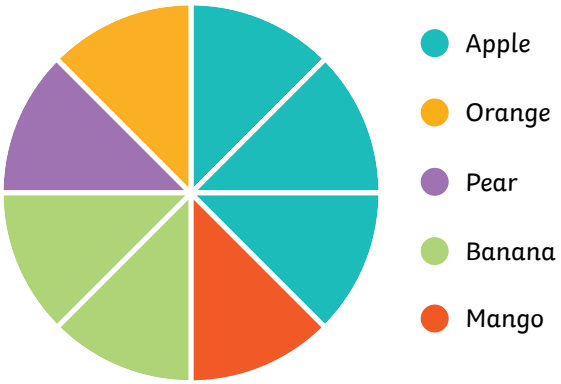
c) What fraction of people chose apples as their favourite fruit?

_____

Favourite Fruit



3) This pie chart shows the different quantities of materials from 250kg of recycled rubbish.

a) Find the weight in kg of each of these materials collected:

glass _____

plastic _____

clothing _____

Recycling

b) Create two of your own questions that could be asked about the chart.

_____

_____

_____

1) 160 children were asked what their favourite subject in school was.
Decide if the statements about the pie chart are true or false. Explain your answers fully.

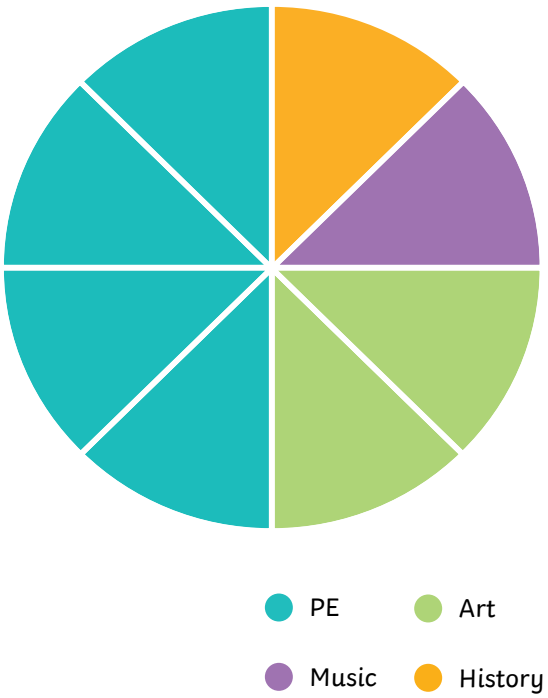
a) 20 children said music was their favourite subject.

b) 40 more children chose PE than history.

c) $\frac{1}{7}$ of the children who were asked chose history as their favourite subject.

d) 25 children from year 5 and 17 children from year 6 chose art as their favourite subject.

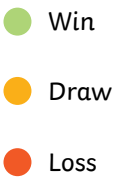
Favourite School Subjects



2) A football team played 36 games and a rugby team played 48 games in a season.
Their results are shown in these pie charts:

Football

Rugby



Look at the statements and explain if you agree or disagree with each child, giving reasons for your answer.

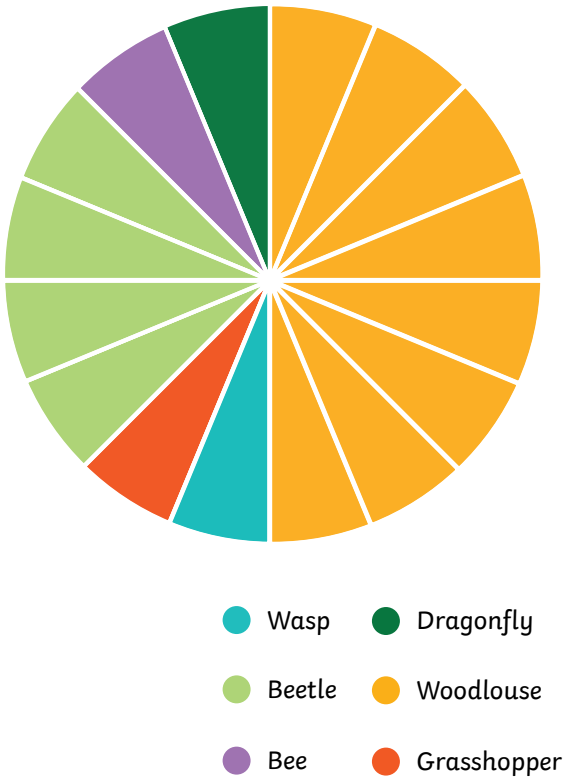
Jack: "I think the football team and the rugby team won the same number of games."

Ruby: "Looking at the pie chart, I think the football team must have lost more games as their loss section looks larger."

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.

Garden Insects



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

Year 6
Transport to School

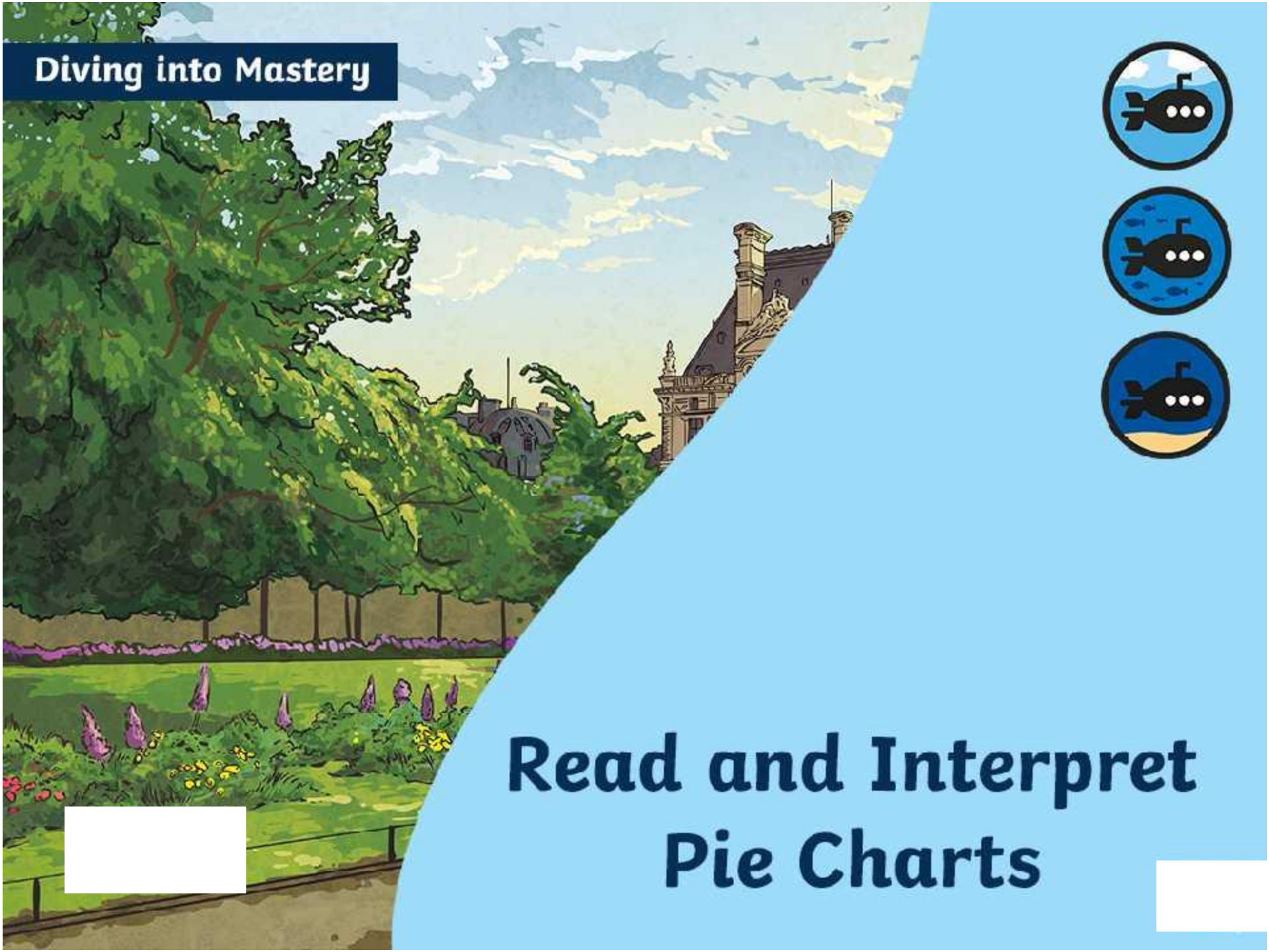
Use these facts to help you answer the following questions:

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.



Read and Interpret Pie Charts

Diving into Mastery Guidance for Educators

Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:

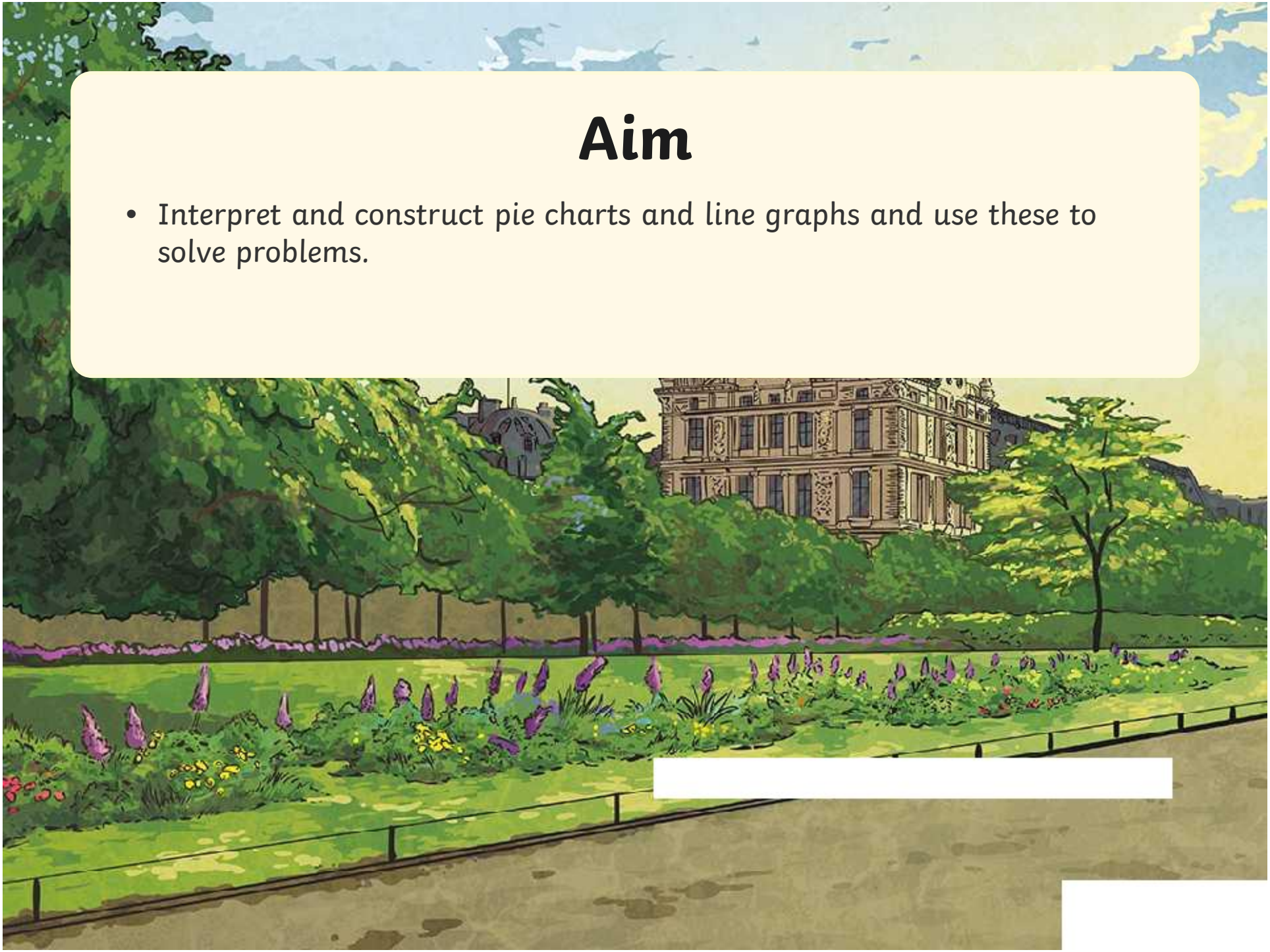
Diving

Deeper

Deepest

These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.

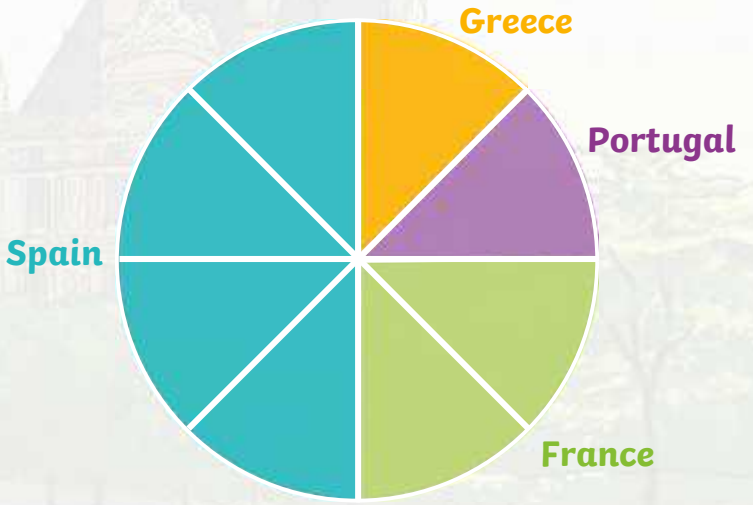


Aim

- Interpret and construct pie charts and line graphs and use these to solve problems.

Read and Interpret Pie Charts | Diving

This pie chart shows the holiday destinations for 480 people.



How many people went to France on holiday?

120

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

$\frac{5}{8}$

How many more people went to Spain than Greece?

Spain = 240 people Greece = 60 people
240 - 60 = 180 more people went to Spain than Greece.

Spain = 480 ÷ 2 = 240
France = 60 × 2 = 120
Greece = 60
Portugal = 60

Read and Interpret Pie Charts | Deeper

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

Win

Loss

Draw

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

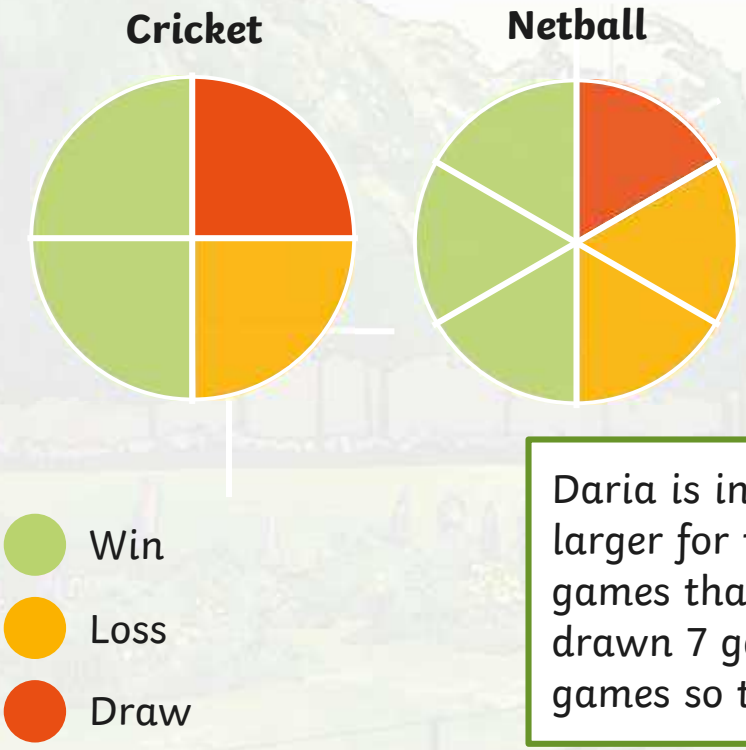
Henry

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.

Read and Interpret Pie Charts | Deeper

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.



I think the cricket team must have drawn more games than the netball team.

Daria

Daria is incorrect. Although the draw section looks larger for the cricket team, they have played less games than the netball team. The netball team has drawn 7 games and the cricket team has drawn 6 games so the netball team has drawn more games.

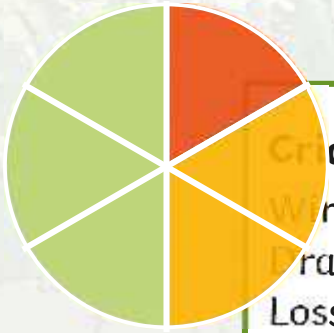
Read and Interpret Pie Charts | Deeper

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

Use the pie chart to find the number of wins, losses and draws that each team had.

Cricket

Netball



Win
Loss
Draw

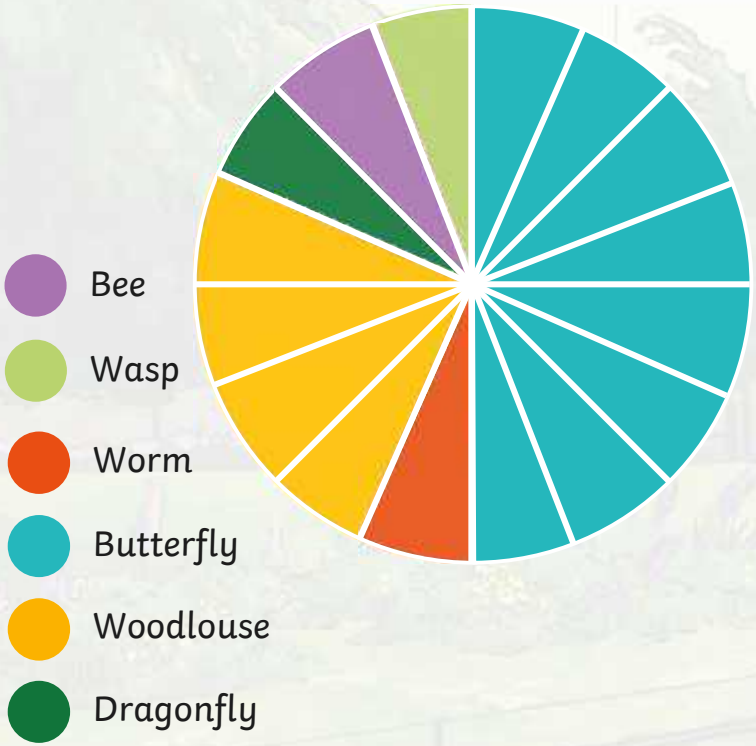
Cricket
Win = 12
Draw = 6
Loss = 6

Netball
Win = 21
Draw = 7
Loss = 14

Read and Interpret Pie Charts | Deepest

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

Insects in a garden



If the number of bees found in the garden was 6, how many insects were found in the garden altogether?

$6 \times 16 = 96$

$4 \times 6 = 24$ $24 - 6 = 18$

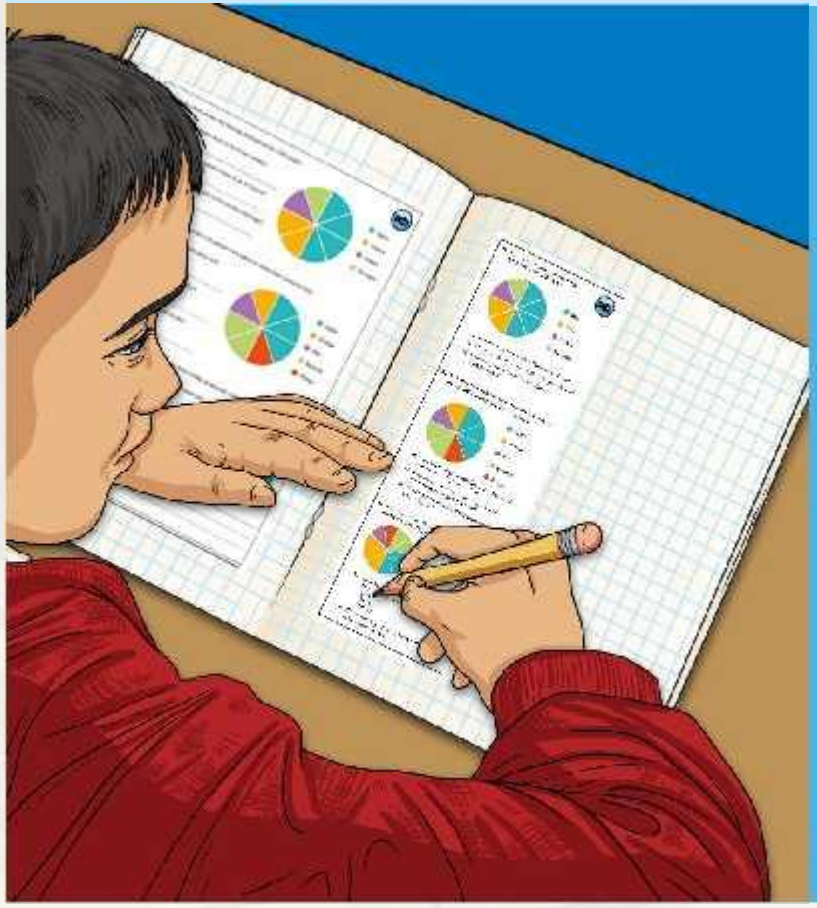
Painted Ladies = were Painted Ladies. How many Red Admirals were found?

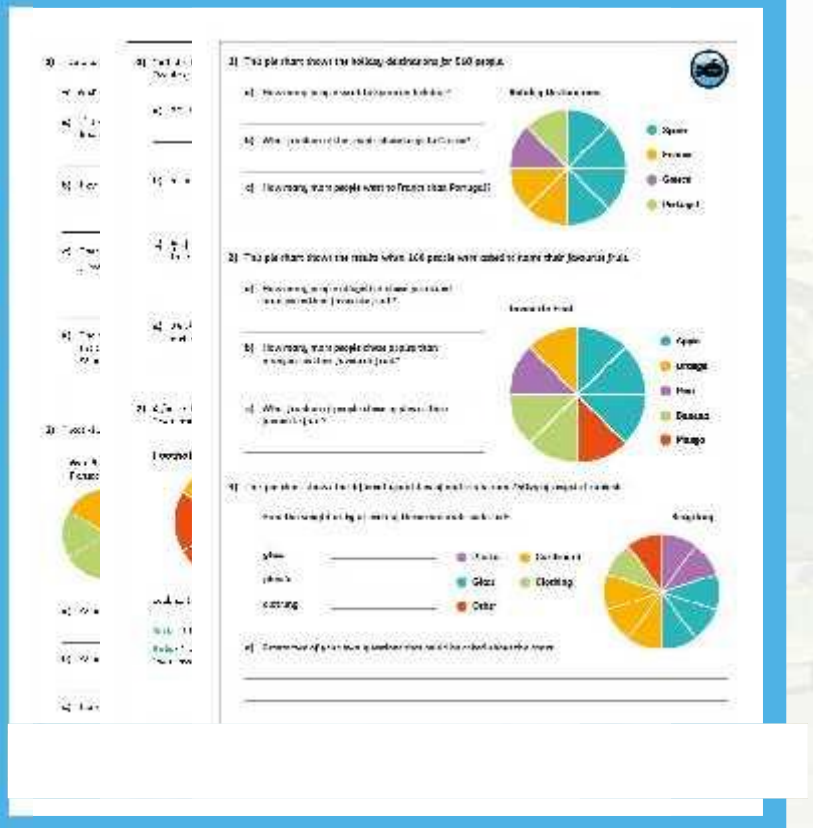
$96 \div 2 = 48$ $48 \div 4 = 12$ $12 \times 3 = 36$

$6 \times 2 = 12$ $\frac{2}{16}$ or $\frac{1}{8}$

Read and Interpret Pie Charts

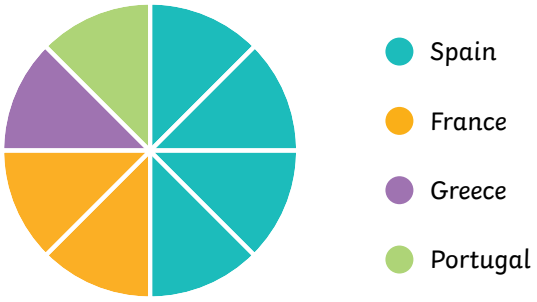
Dive in by completing your own activity!





1) This pie chart shows the holiday destinations for 560 people.

Holiday Destinations



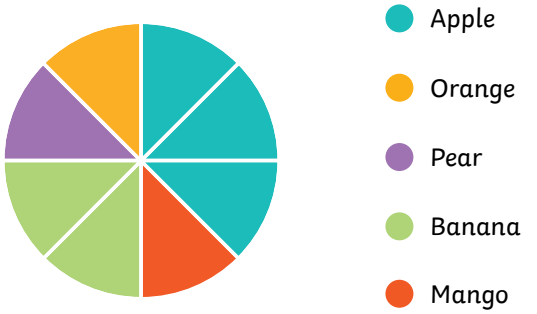
a) How many people went to Spain on holiday?

b) What fraction of the people chose to go to Greece?

c) How many more people went to France than Portugal?

2) This pie chart shows the results when 160 people were asked to name their favourite fruit.

Favourite Fruit



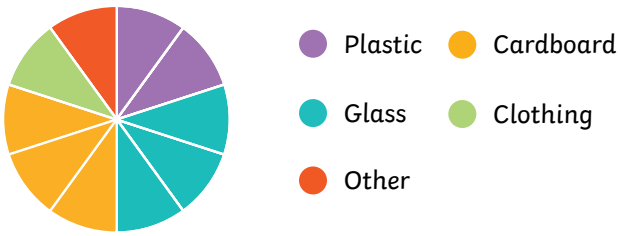
a) How many people altogether chose pears and oranges as their favourite fruit?

b) How many more people chose apples than mangoes as their favourite fruit?

c) What fraction of people chose apples as their favourite fruit?

3) This pie chart shows the different quantities of materials from 250kg of recycled rubbish.

Recycling

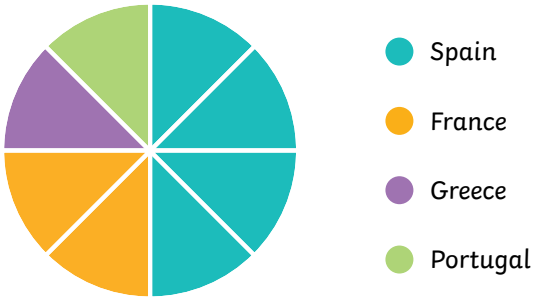


a) Find the weight in kg of each of these materials collected:
- glass
- plastic
- clothing

b) Create two of your own questions that could be asked about the chart.

1) This pie chart shows the holiday destinations for 560 people.

Holiday Destinations



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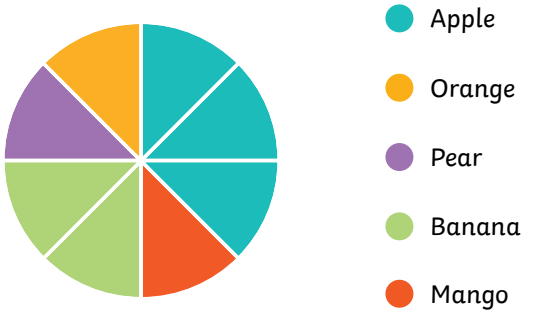

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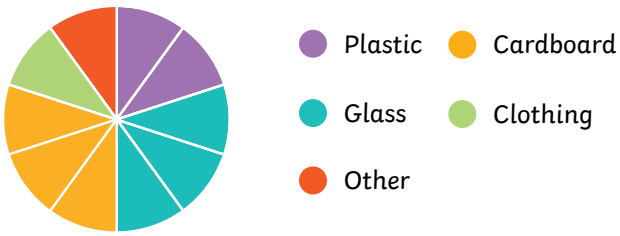


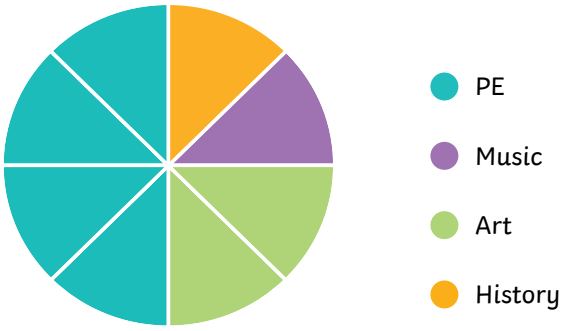
a) Find the weight in kg of each of these materials collected:
- glass
- plastic
- clothing

b) Create two of your own questions that could be asked about the chart.

Regent Studies | www.regentstudies.com

1) 160 children were asked what their favourite subject in school was. Decide if the statements about the pie chart are true or false. Explain your answers fully.

Favourite School Subjects



a) 20 children said music was their favourite subject.

b) 40 more children chose PE than history.

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d) 25 children from year 5 and 17 children from year 6 chose art as their favourite subject.

2) A football team played 36 games and a rugby team played 48 games in a season.

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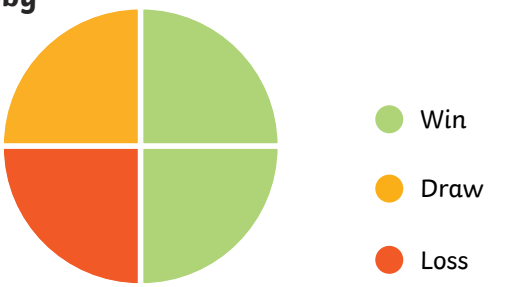
Football

Rugby



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Jack: "I think the football team and the rugby team won the same number of games."

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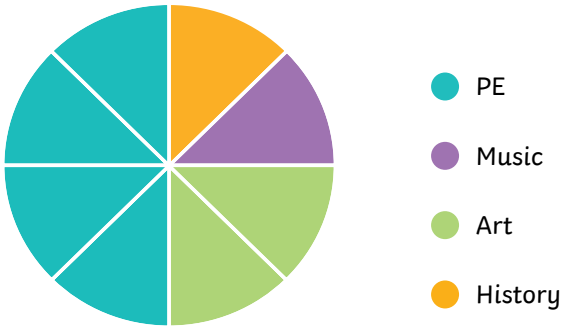
Favourite School Subjects



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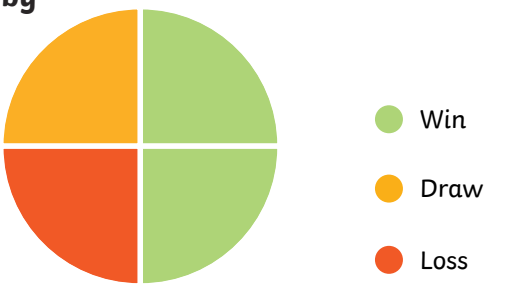

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Answer the following questions, showing your working out.

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

Year 6
Transport to School

Walk Bike Car

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.

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