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

Holiday Destinations

- Spain
- France
- Greece
- Portugal

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.
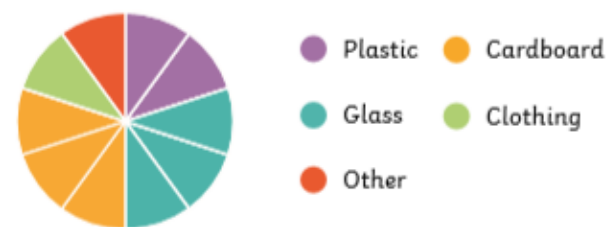
Favourite Fruit

- Apple
- Orange
- Pear
- Banana
- Mango

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

- Plastic
- Cardboard
- Glass
- Clothing
- Other

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) 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

- PE
- Music
- Art
- History

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.

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

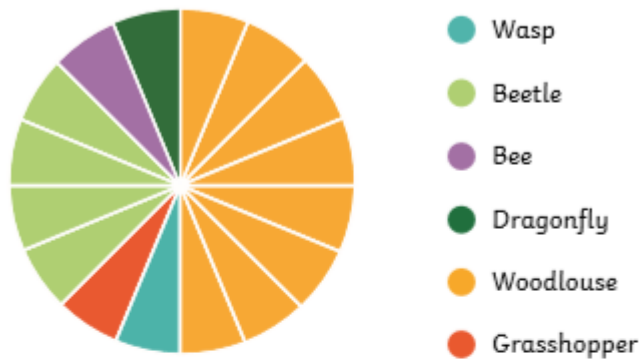**Rugby**

- Win
- Draw
- Loss

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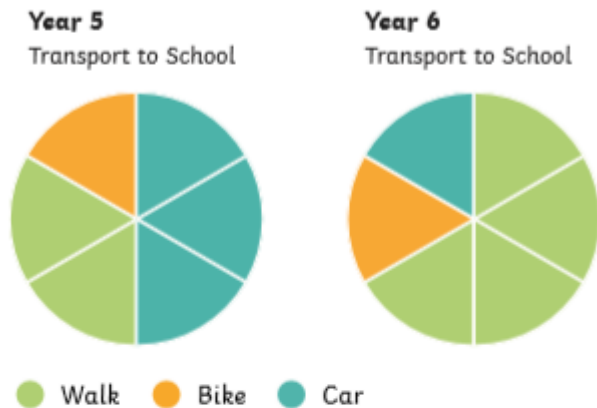
1) This pie chart shows the numbers of different insects that were found in a back garden.

- Wasp
- Beetle
- Bee
- Dragonfly
- Woodlouse
- Grasshopper

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
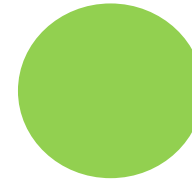Transport to School

- Walk
- Bike
- Car

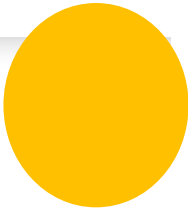Use these facts to help you answer the following questions:

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.

ANSWERS

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) $3 \times 16 = 48$

   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.