

Interpreting Pie Charts



Learning Intention

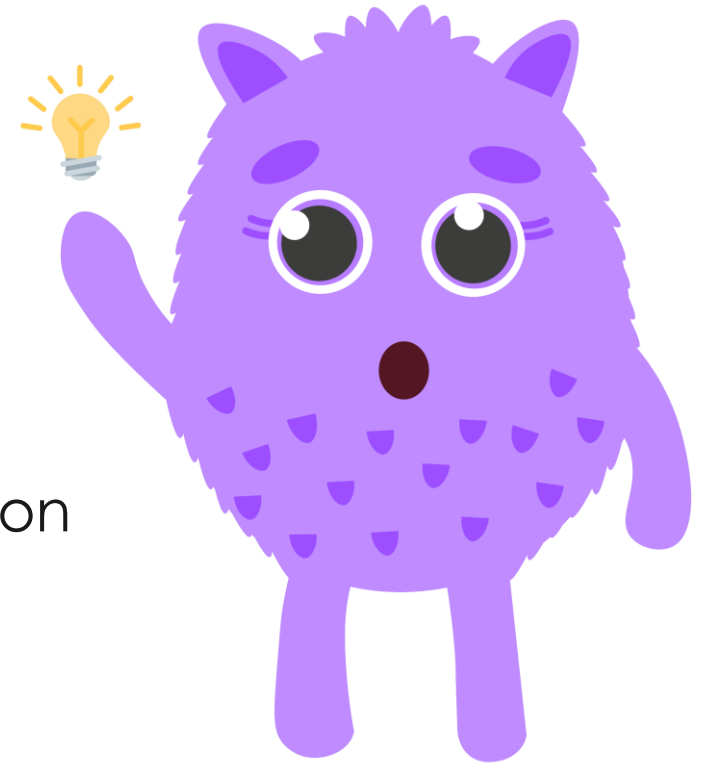


We are learning to **interpret** and **draw conclusions** from information **displayed** in pie charts.

Success Criteria



- **Use** multiplication and division to work out how many each section on a pie chart represents.
- **Use** your knowledge of fractions to answer questions on the data shown in a pie chart.
- **Compare** data in two pie charts.



Introduction



In the last lesson, we learned about interpreting bar graphs. Today we are going to learn about pie charts.

Pie charts are good for showing how many people or objects in total your data is about. These are called categories.

They are also useful when you are working out percentages or fractions of an amount.

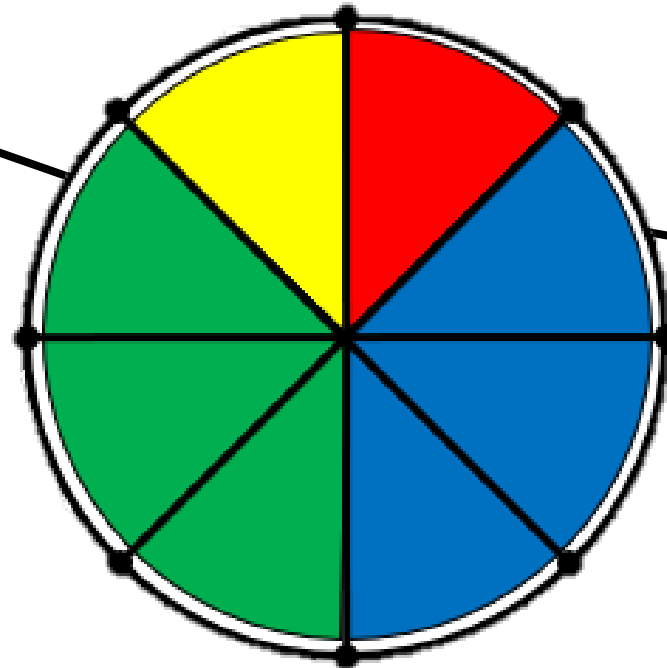
Pie charts work best when you have a small number of categories (no more than 6 is ideal).

Pie Charts



Pie charts are a useful way of displaying data.

This pie chart is divided into 8 sections, so we know that each section is $\frac{1}{8}$ of the whole amount.

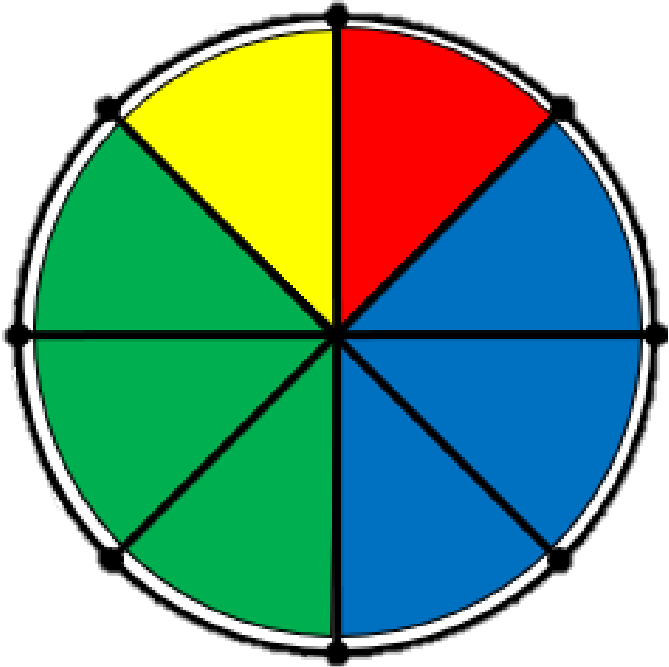


If there was no other data, we could assume that this pie chart relates to 8 people or objects. Each section would represent one person or object.

Pie Charts Activity



This pie chart shows a group of children's favourite colours. Answer the following questions based on this pie chart:



1. How many people were surveyed altogether?
2. What fraction of the people surveyed chose each colour?
3. Which other colour has the same amount of choices as green?

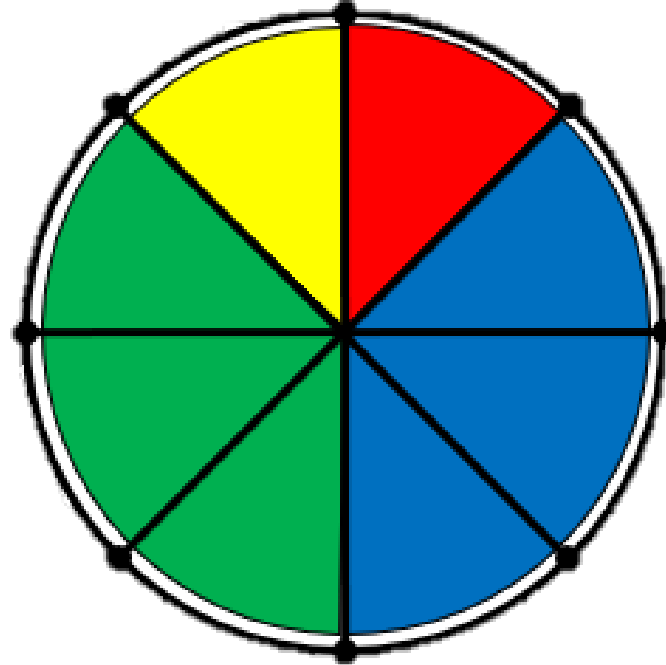
Reading Pie Charts



A pie chart like this can also represent a different number to the number of sections shown. If you have more information, you can still work out how many each section represents.

Imagine this pie chart shows the different colours of t-shirts worn by 40 children on Sports' Day.

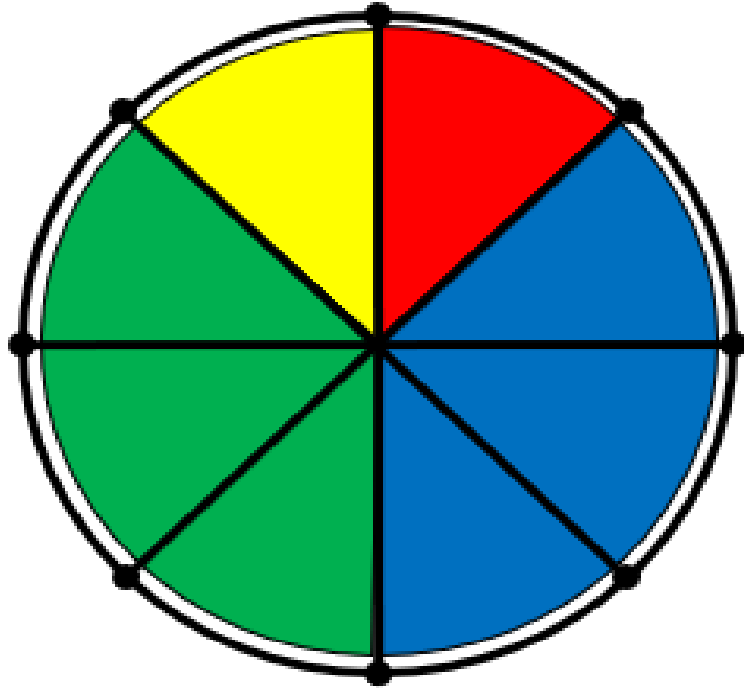
The pie chart is split into 8 sections, so we can still say that each section is $\frac{1}{8}$ of the whole amount.



$\frac{1}{8}$ of 40 is the same as $40 \div 8$, so each section represents 5 people.

3 sections are coloured green, so 3×5 people were wearing green. This tells me that 15 people were wearing green.

Pie Charts Activity



Red = 8
Blue = ?
Green = ?
Yellow = ?

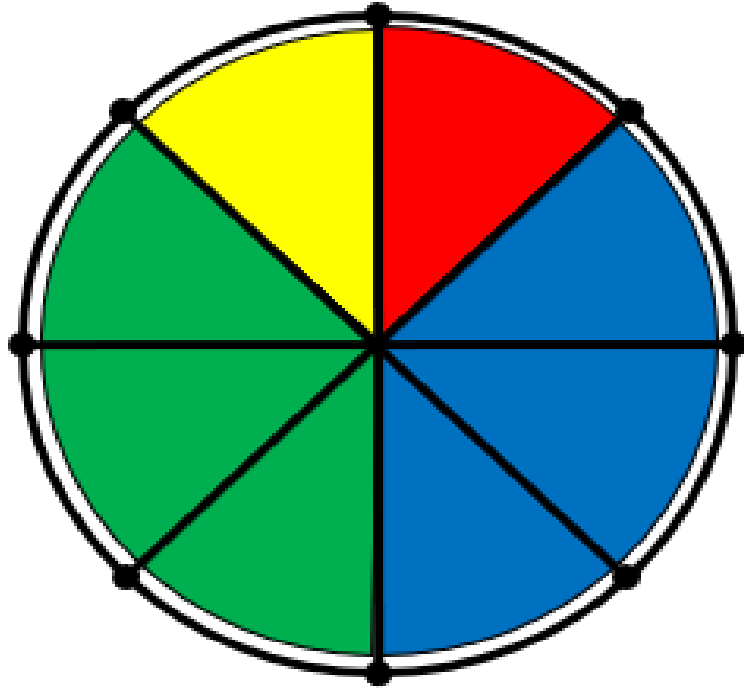
This pie chart shows a group of children's favourite colours.

We can see that 8 children chose red.

Use this information to work out how many children chose each of the other colours.

[Click here for the answers](#)

Pie Charts Answers



Red = 8
Blue = ?
Green = ?
Yellow = ?

We know that 8 children chose red.

Only one section is coloured red, so each section must represent 8 children.

One section is coloured yellow, so 8 children chose yellow.

Three sections are coloured green and three sections are coloured blue, so we can multiply the 3 sections by 8. This tells us that (3×8) 24 children chose green and 24 also chose blue.

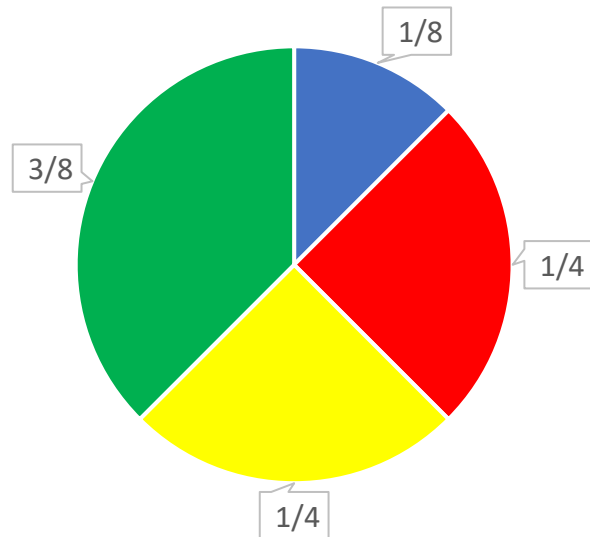
Reading Pie Charts



If you fancy a challenge, try this activity.

The children in Primary 7 were asked how they liked their potatoes cooked. This pie chart shows their results.

How Primary 7 Like Their Potatoes Cooked



- Roast
- Jacket
- Chips
- Mashed

6 children said they preferred roast potatoes.

Look at the key to the right of the chart, to find out which choice each colour represents.

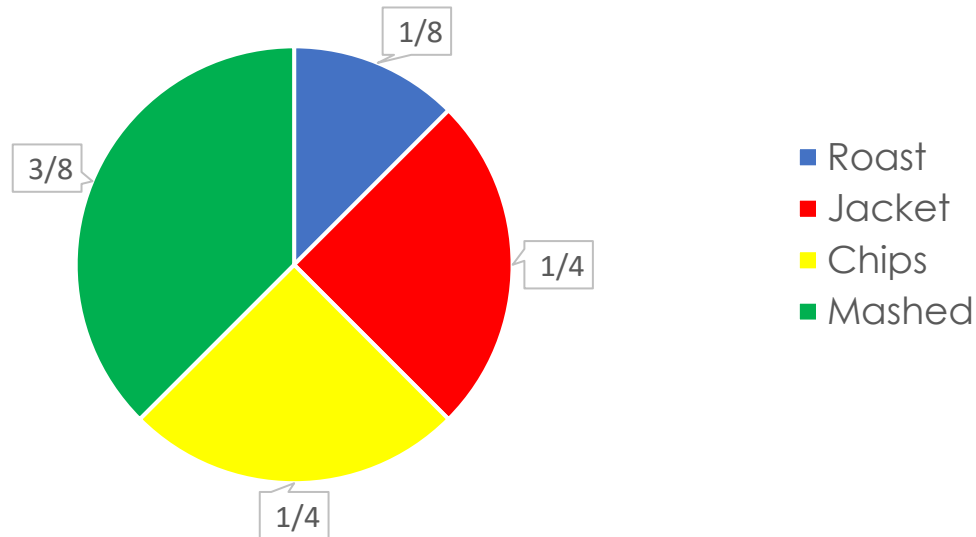
Use this information to answer the questions on the next slide.

Reading Pie Charts



The children in Primary 7 were asked how they liked their potatoes cooked. This pie chart shows their results.

How Primary 7 Like Their Potatoes Cooked



6 children said they preferred roast potatoes.

1. Work out how many children chose each answer.
2. How many more chose mashed potatoes than roast potatoes?
3. What fraction of children chose chips and mashed potatoes altogether?
4. How many children took part in this survey?

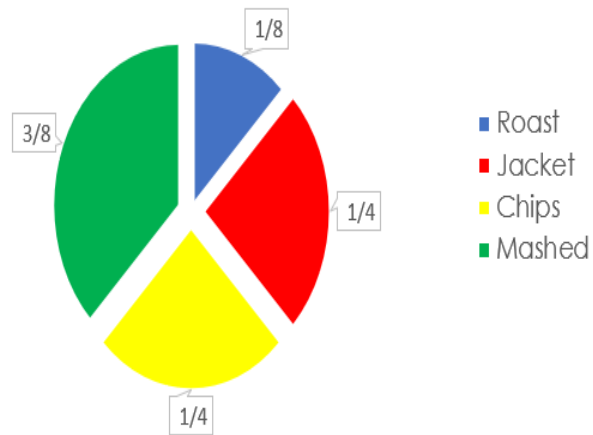
[Click here for the answers](#)

Reading Pie Charts



The children in Primary 7 were asked how they liked their potatoes cooked. This pie chart shows their results.

How Primary 7 Like Their Potatoes Cooked



We've been told that 6 children prefer roast potatoes and the key tells us that roast potatoes are shown in blue. We can see that $\frac{1}{8}$ of the children chose roast potatoes, so we know that $\frac{1}{8}$ of the total amount is 6.

1. We know that 6 children chose roast potatoes, which is $\frac{1}{8}$.
 $\frac{3}{8}$ chose mashed potatoes, so we need to multiply 6 by 3, which gives us 18.
- $\frac{1}{4}$ chose jacket and $\frac{1}{4}$ chose chips. $\frac{1}{4}$ is the same as $\frac{2}{8}$ so we can multiply 6 by 2 to get these answers, which is 16.

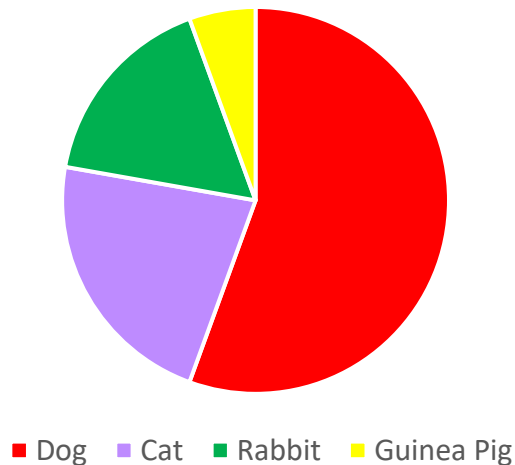
1. 12
2. $\frac{5}{8}$
3. 48

Comparing Pie Charts

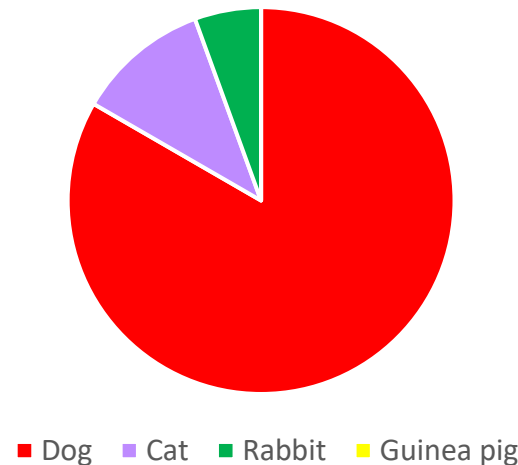


We can also use pie charts to compare data. These pie charts show which pets the children in Rooms 1 and 2 have. There are 20 children in each class.

Pets in Room 1



Pets in Room 2



We can tell that more people in Room 2 have a dog than in Room 1 because more of the pie chart is shaded red.

More children in Room 1 have a cat than in Room 2.

We can also see that no children in Room 2 have a guinea pig because no areas are shaded yellow.

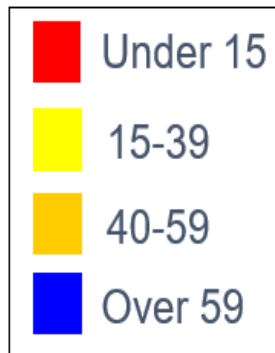
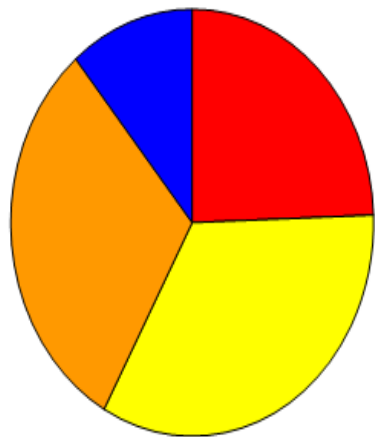


Comparing Pie Charts

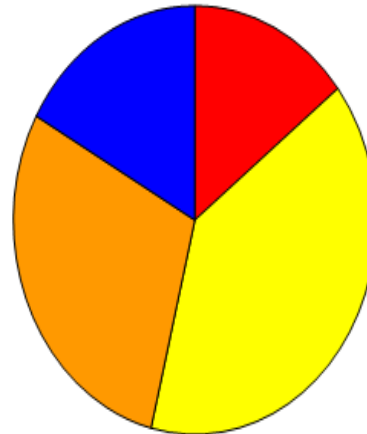


If you fancy a challenge, try to answer the questions by comparing these pie charts, which show the ages of people in Ireland and Greece.

Ireland



Greece



1. In which country is a greater amount of the population under 15?
2. In which age range are the greatest amount of people in Greece?
3. What can you tell about the ages of people aged between 40 and 49 in both countries?

Be careful!

These charts don't tell us how many people are in each country, so we can only compare them in fractions or percentages of their populations.

[Click here for the answers](#)

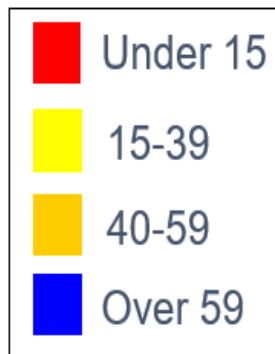
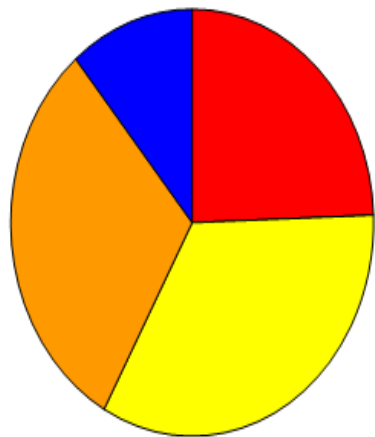


Comparing Pie Charts

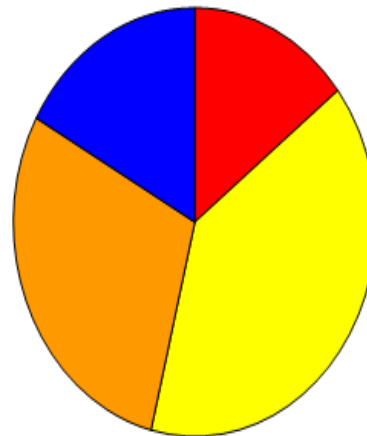


Try to answer the questions by comparing these pie charts, which show the ages of people in Ireland and Greece.

Ireland



Greece



1. Ireland
2. 15 - 39
3. There are about the same fraction of people aged between 40 and 49 in each country.



Self Assessment



We will know if we have been successful if we can:

- **Use** multiplication and division to work out how many each section on a pie chart represents.
- **Use** your knowledge of fractions to answer questions on the data shown in a pie chart.
- **Compare** data in two pie charts.



Share your learning



We love to see you all taking part in our lessons. Remember to share your learning with us.



@NLDigitalSchool
#NLVirtualClassroom





LEARN HERE

