

## Lesson 2

**L.O: I am learning to read and interpret pie charts with percentages (2)**

# Starter



## Making links

Here is a percentage fact..

Can you make links from that percentage fact to fill in the blanks?

Can you explain **HOW** you have made the connections?

$$180 = 100\%$$

50%



10%



20%



%



1.8

# ANSWERS: Starter

Can you explain  
HOW you have  
made the  
connections?

**180 = 100%**

50% → 90

50% = half.  
Half of 180  
= 90

10% → 18

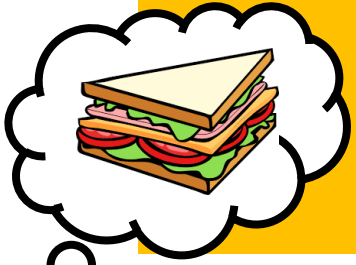
Divide by 10

20% → 36

Double the 10% fact

1% → 1.8

Divide the first fact by 100 OR  
divide the 10% fact by 10



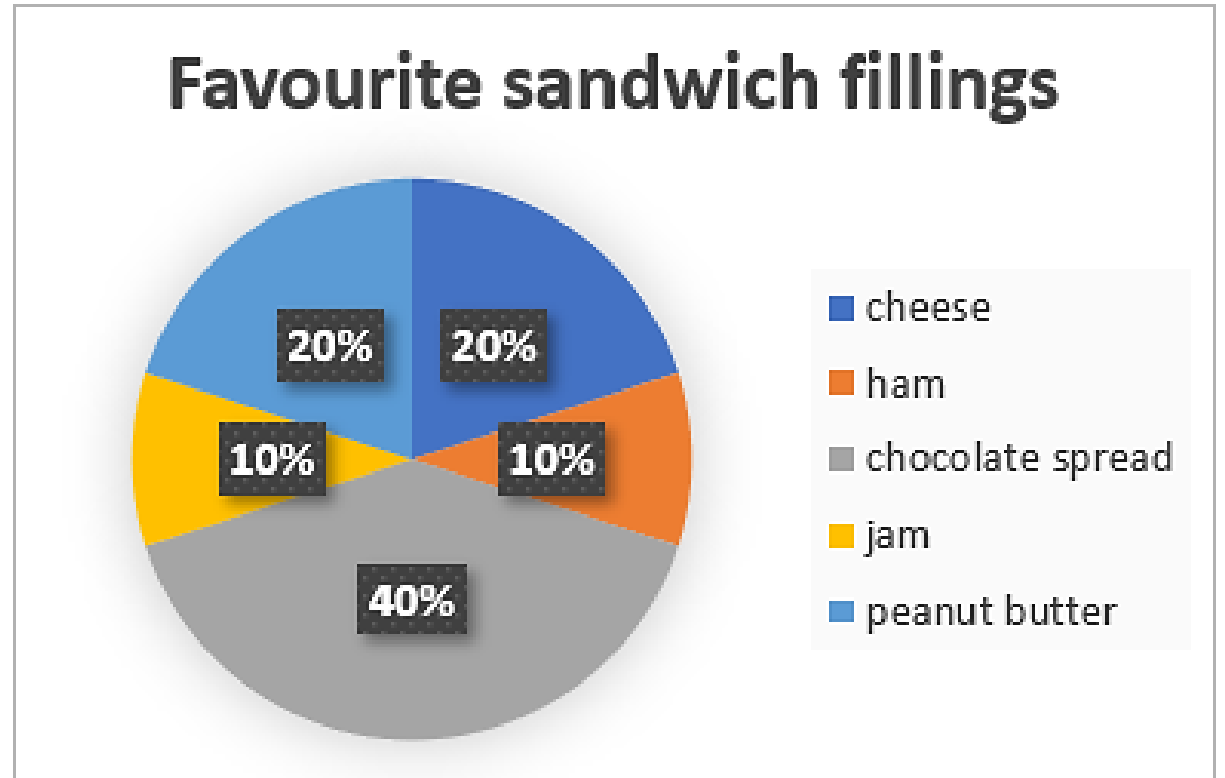
# Interpreting Pie Charts with percentages

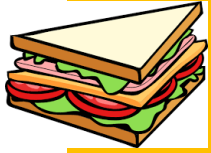
300 children were surveyed to find out their favorite sandwich filling.

Here is a pie chart of their results.

a) How many people voted for jam?  
How did you work it out?

b) How many people did NOT vote for peanut butter?  
How do you know?





# ANSWERS: Interpreting Pie Charts with percentages

300 children were surveyed to find out their favorite sandwich filling.

Here is a pie chart of their results.

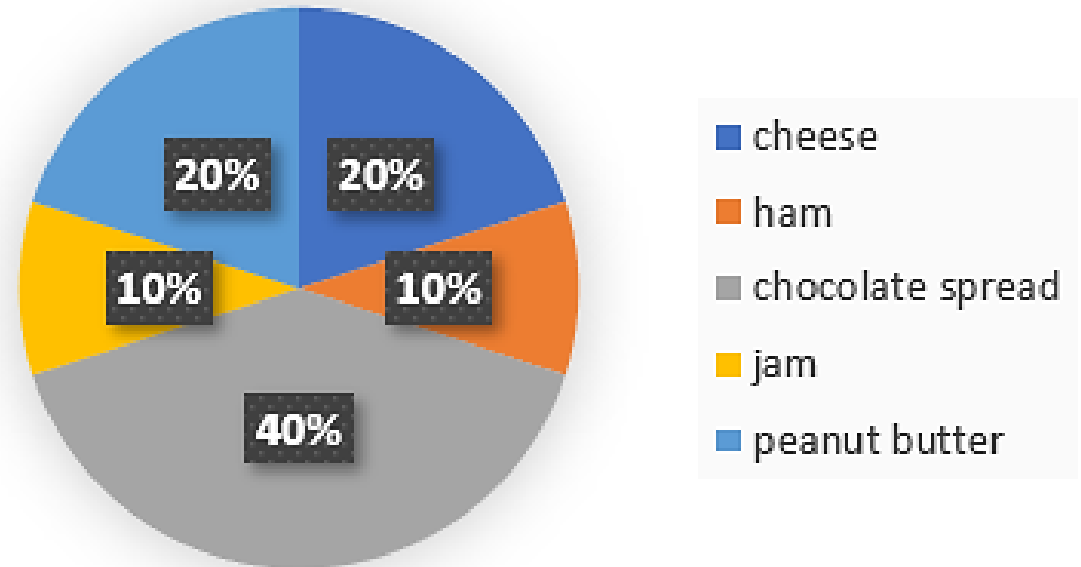
a) How many people voted for jam? **30**

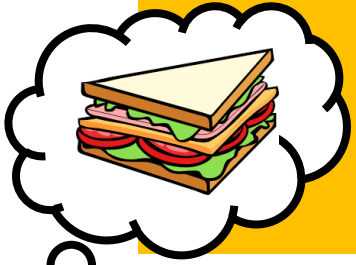
How did you work it out? **10% of 300**

b) How many people did NOT vote for peanut butter? **240**

How do you know? **20% DID vote FOR peanut butter.  $20\% = 2 \times 30$  (see answer a) is 60. Subtract 60 from 300 = 240.**

Favourite sandwich fillings





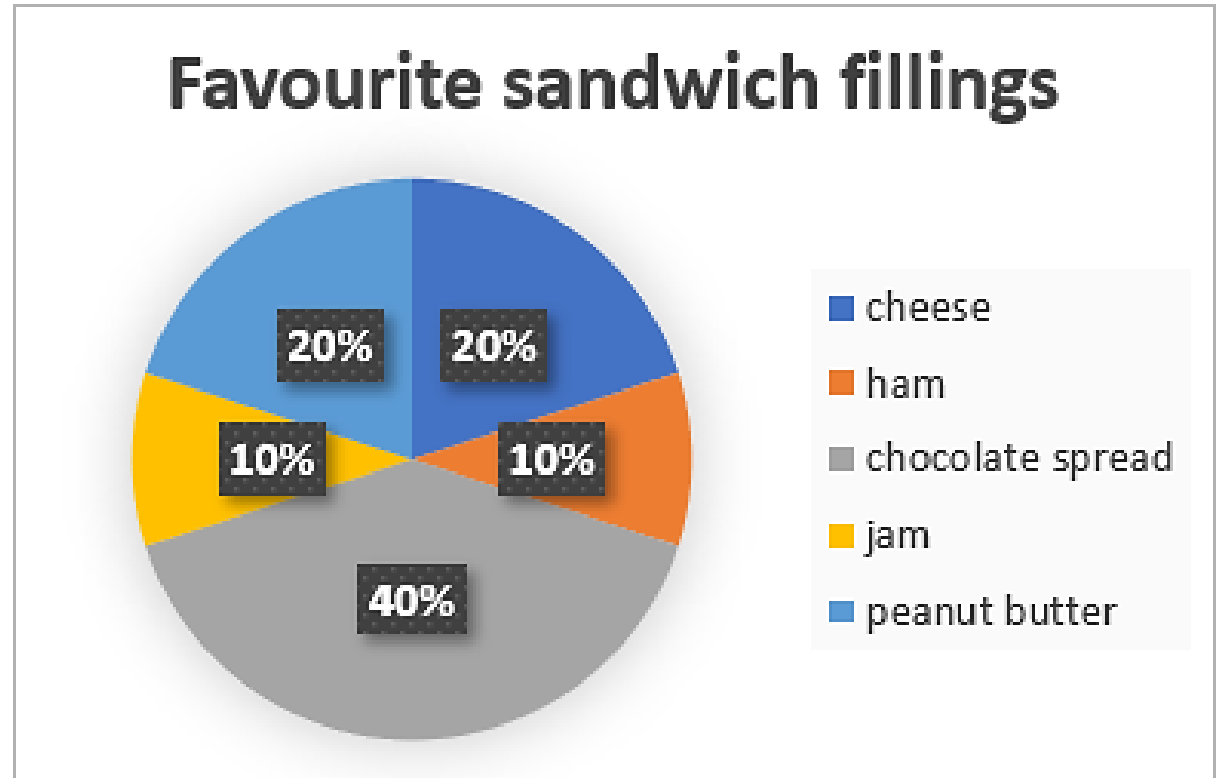
# Interpreting Pie Charts with percentages

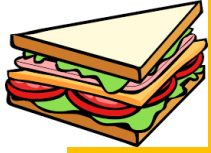
300 children were surveyed to find out their favorite sandwich filling.

Here is a pie chart of their results.

a) How many MORE children chose chocolate spread rather than cheese?

b) How many children chose peanut butter, ham and jam altogether?



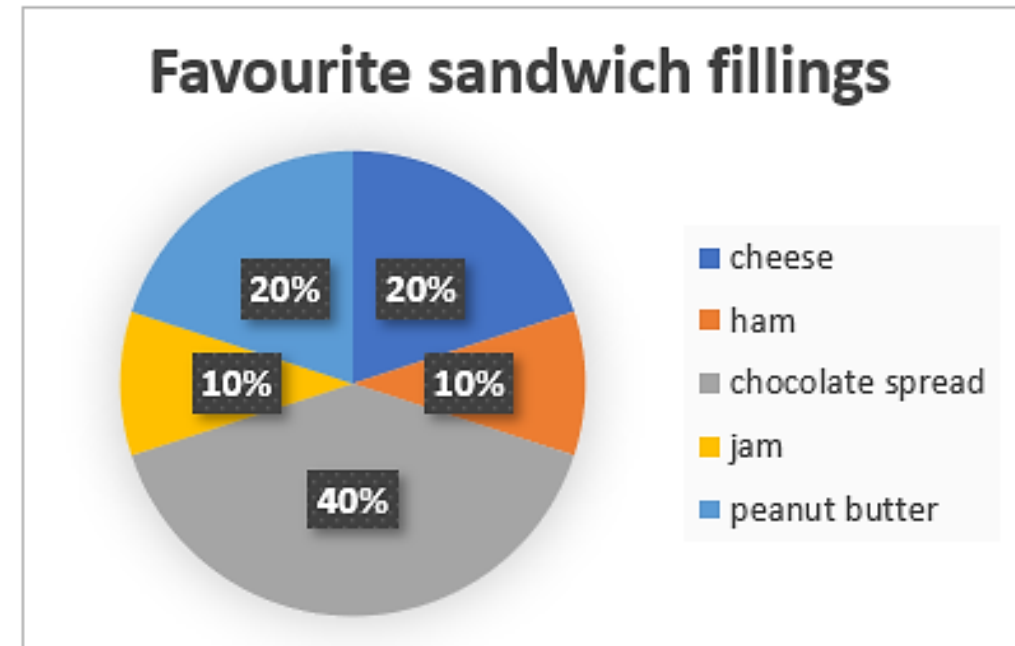


# ANSWERS: Interpreting Pie Charts with percentages

300 children were surveyed to find out their favorite sandwich filling. Here is a pie chart of their results.

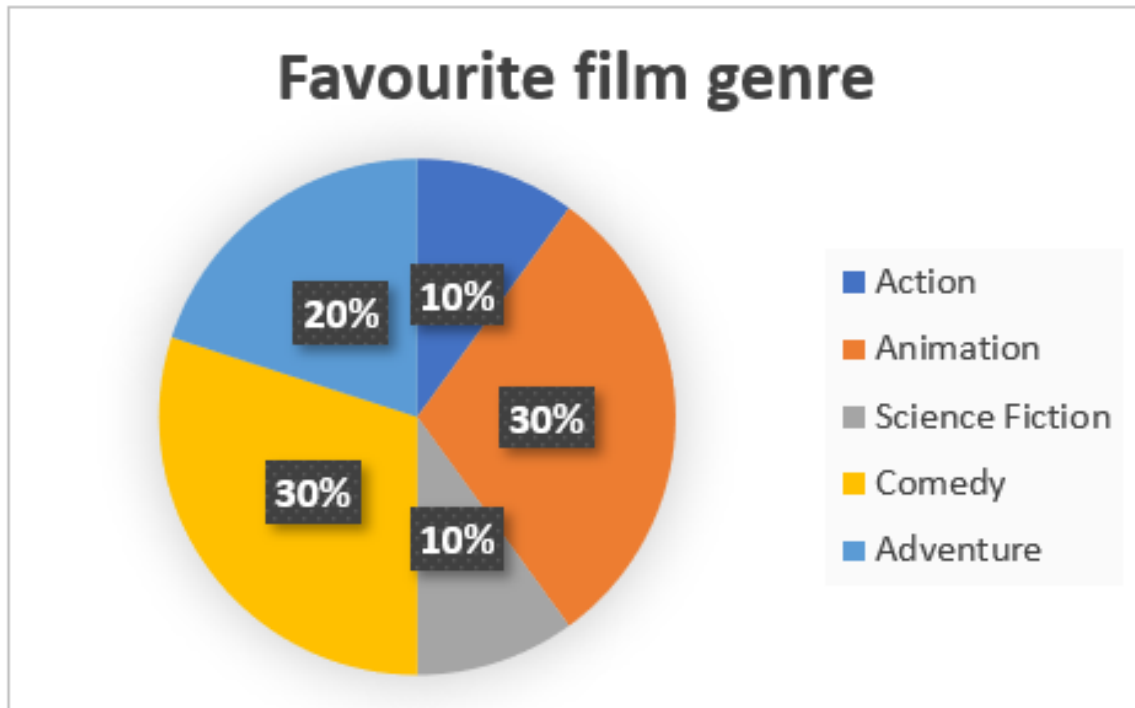
- a) How many MORE children chose chocolate spread rather than cheese? **60**  
40% - or 120 children - chose chocolate spread. 20% chose cheese.  
20% is half of 40%, so half of 120 = 60. Subtract 60 from 120 to get 60.

- b) How many children chose peanut butter, ham and jam altogether?  
Peanut butter is 20%, and ham and jam are both 10%. 10% of 300 = 30.  
Double 10% to get 20%. So, double 30 = 60, plus 30 + 30 = 120 children.





# Interpreting Pie Charts with percentages



180 Year 6 children were asked to choose their favourite type (or genre) of film.

This pie chart shows the results.

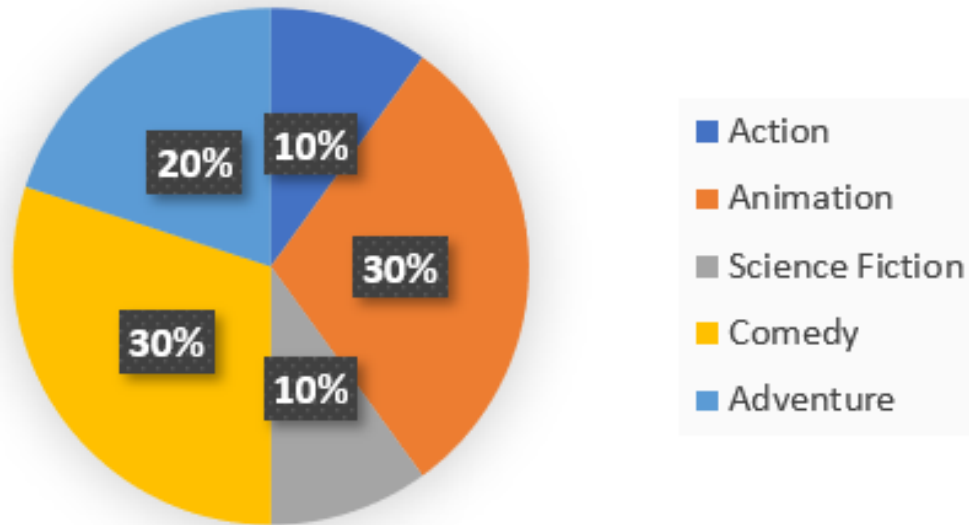
- How many children chose comedy?  
How did you work it out?
- How many MORE children chose animation rather than science fiction?





# ANSWERS: Interpreting Pie Charts with percentages

Favourite film genre



180 Year 6 children were asked to choose their favourite type (or genre) of film.

This pie chart shows the results.

a) How many children chose comedy? **54**

How did you work it out? **To find 30%, find 10% and multiply by 3. 10% of 180 is 18.  $18 \times 3 = 54$ .**

b) How many MORE children chose animation rather than science fiction? **36**

**Use your answers from a) to help you. Animation is 30% - which is 54 children.**

**Science Fiction is 10% - which is 18.  $54 - 18 = 36$ .**

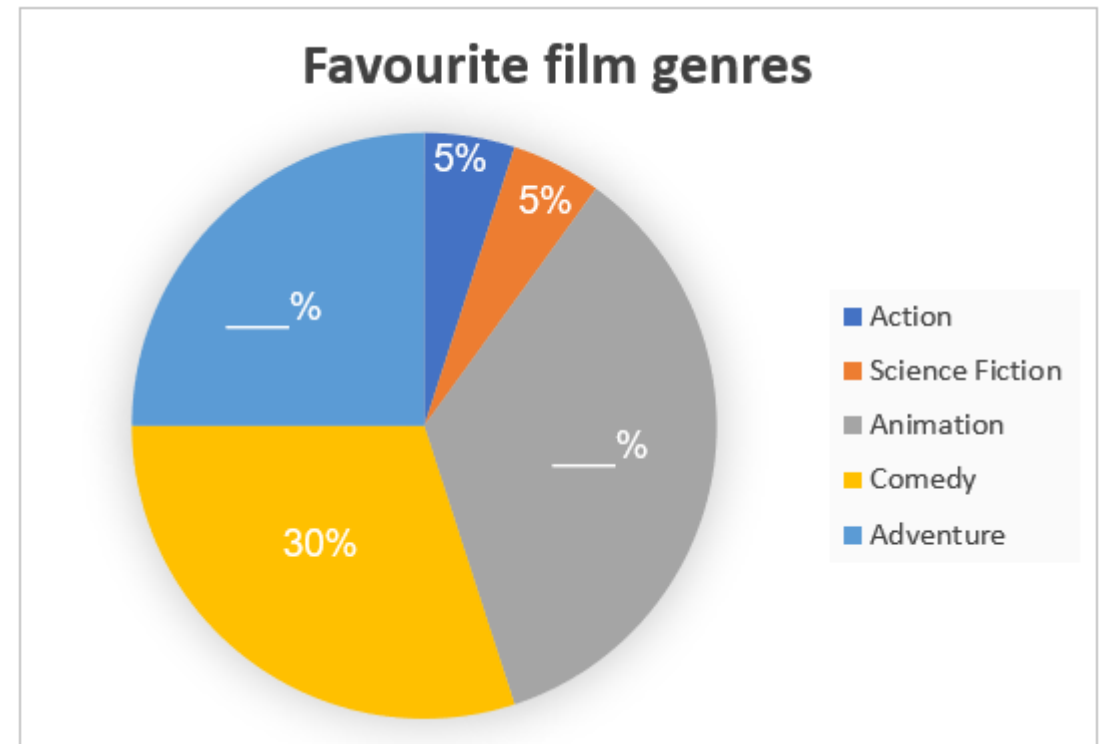


# Missing Values

Here is a different survey of favourite films.

All the sections are there, but the percentages are not complete.

Can you finish the labelling?





# ANSWERS: Missing Values

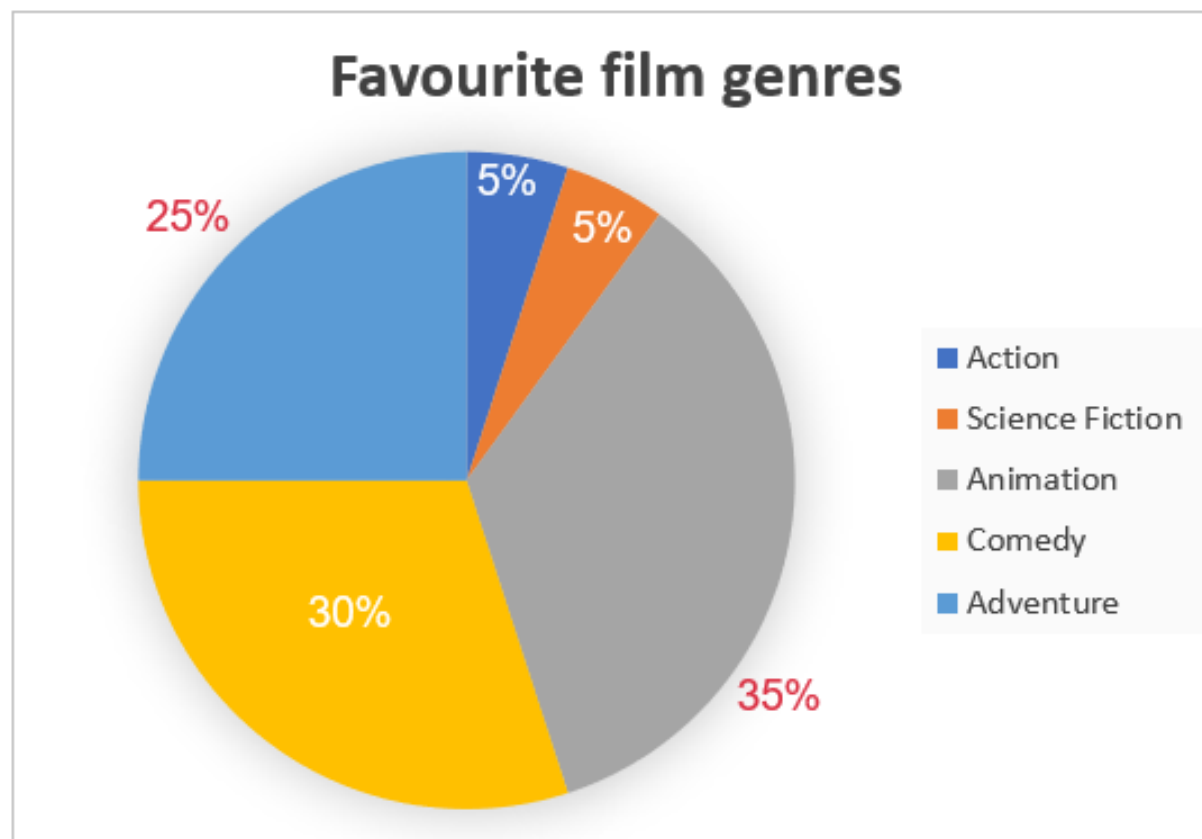
A quarter of the chart is 25% (adventure).

Then:

$30\% + 25\% + 5\%$

$+ 5\% = 65\%$ , so

$100\% - 65\% = 35\%$ .



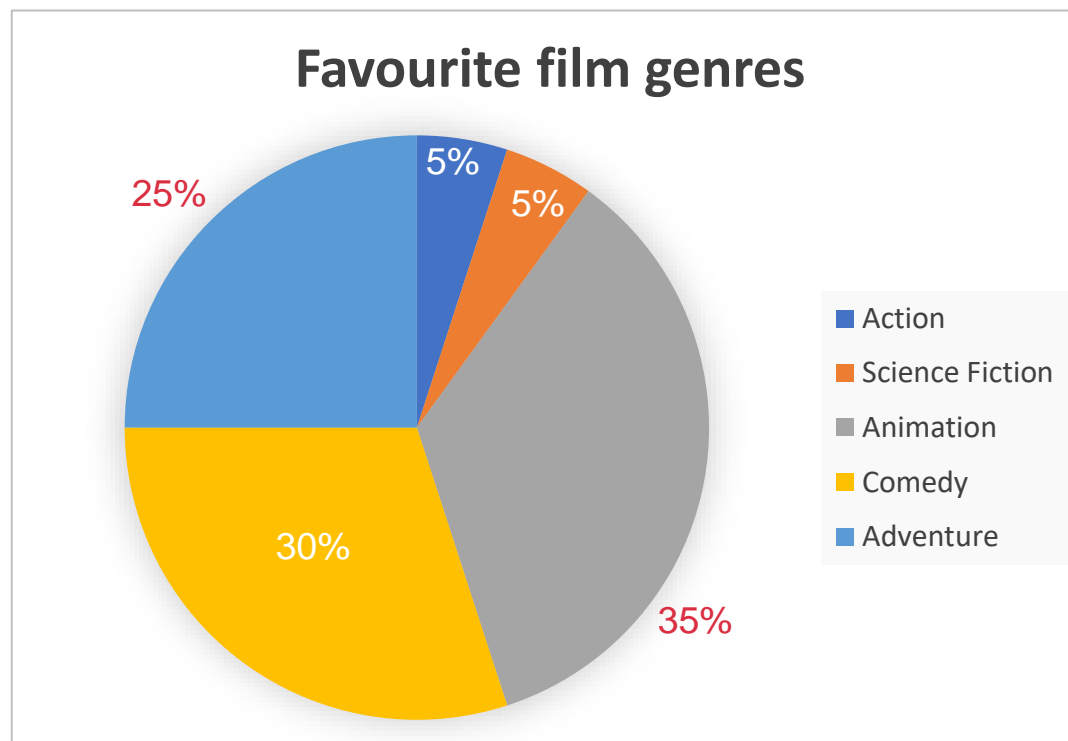
## To be able to interpret pie charts with percentages

### ACTIVITY 1:

### What's missing?

Here is a different survey of favourite films.  
All the sections are there, but the percentages  
are not complete.  
Can you finish the labelling?

How do you  
know that  
you have  
found the  
missing  
percentages  
?



### Success Criteria:

#### Mastery:

I can calculate percentages of amounts, making links to fractions, so that I can interpret pie charts.

#### Greater Depth:

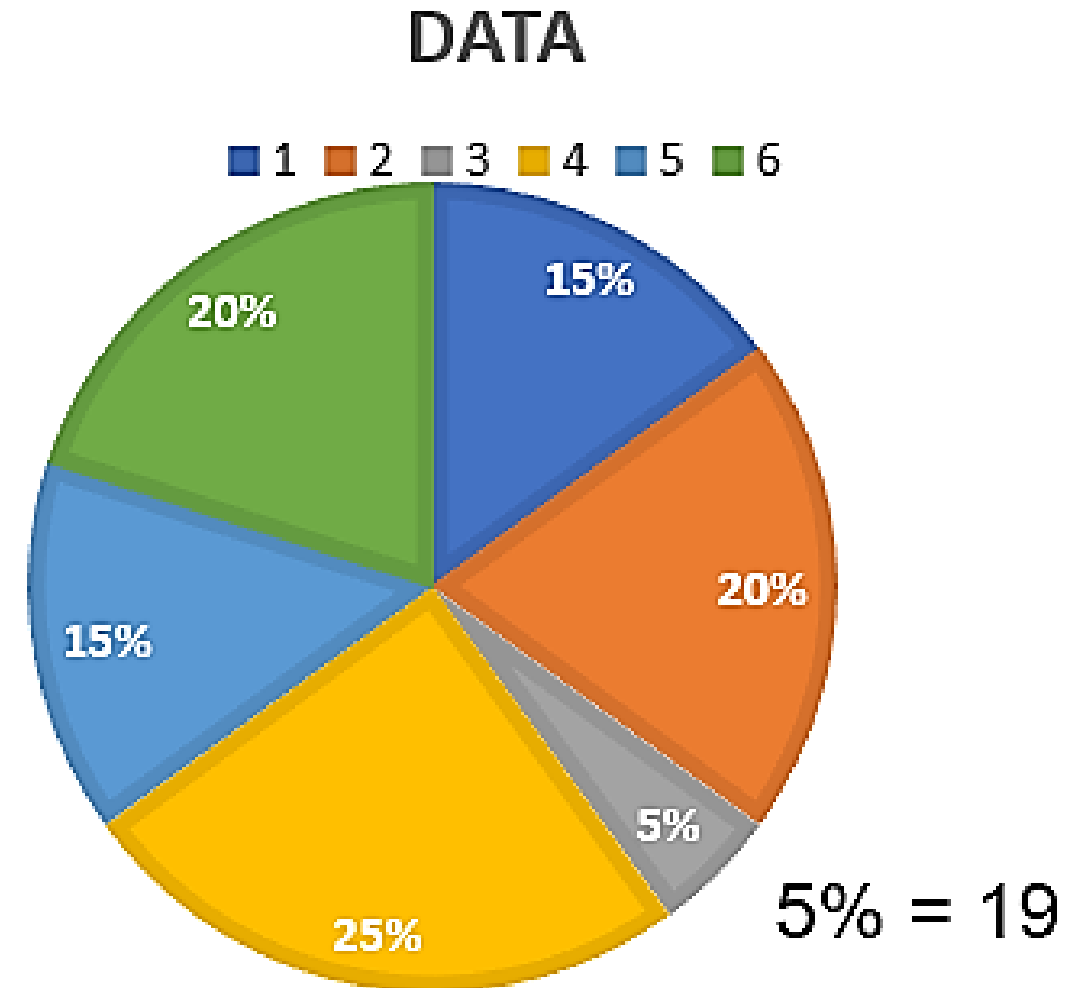
I can use my knowledge of the above to apply reasoning to solve a variety of problems.

# Use what you know!

Here is a pie chart with the percentages listed and the number of people in the survey recorded for one section.

How many people were surveyed for this data?

How do you know?



# Use what you know!

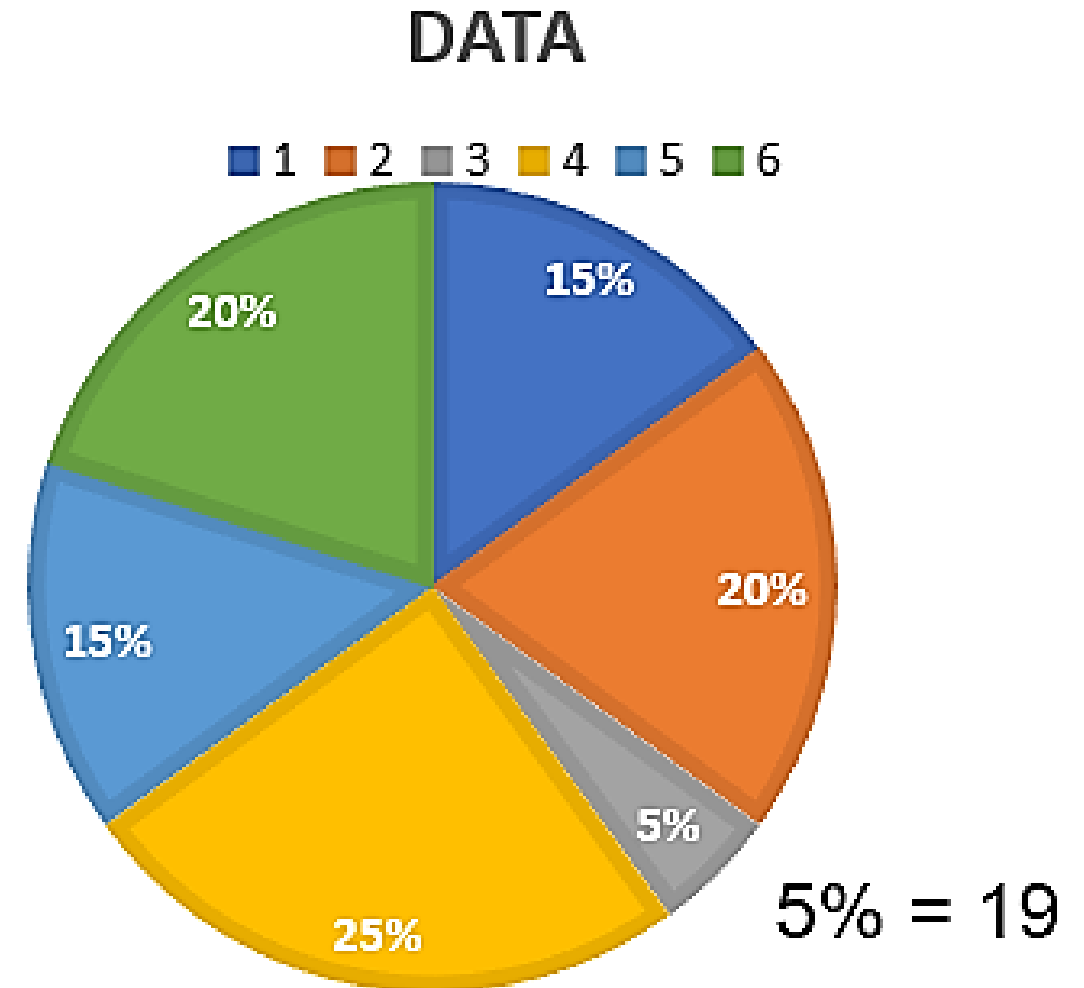
How many people were surveyed for this data?

How do you know?

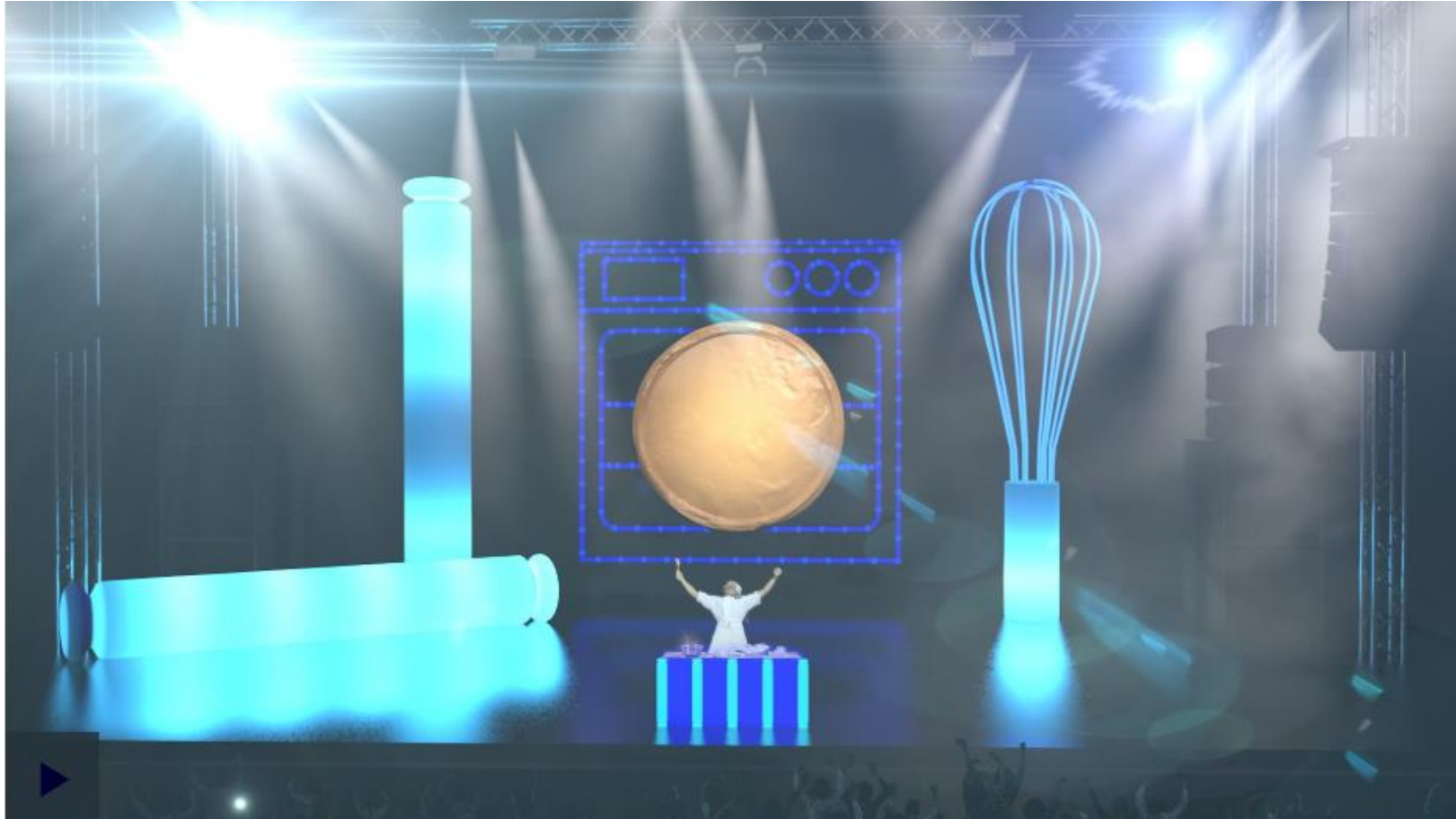
380 people were surveyed.

If 5% is 19 people, then 10% is double  
 $19 = 38$ .

The full survey = 100%, which is 10 x  
 $38$ .




# A helpful revision video



<https://www.bbc.co.uk/teach/class-clips-video/maths-ks2-pie-and-pie-again-pie-charts/zbbhf4j>

Once you have finished turn this assignment in on Google Classroom.



# Task

All	All of you must complete the fluency section.
Most	Most of you will complete the fluency and reasoning sections.
Some	Some of you will complete the fluency, reasoning, and problem-solving sections.

Try your best – it is all we can ask for! 😊

This video may help if you are stuck at any point:

<https://www.bbc.co.uk/teach/class-clips-video/maths-ks2-pie-and-pie-again-pie-charts/zbbhf4j>

Week 2\_Maths\_Lesson 2

**Lesson 2**

I am learning to read and interpret pie charts with percentages (2)

All	All of you must complete the first 3 questions
Most	Most of you will complete the fluency and reasoning sections.
Some	Some of you will complete the fluency/reasoning, and problem-solving sections.

Try your best – it is all we can ask for! 😊

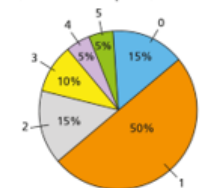
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**Fluency and reasoning**

Key vocabulary: sector, percentage, total	Your answer
<p>150 children voted for their favourite ice cream flavours. Here are their results:</p> <p>How many people voted for Vanilla?</p> <p>How many more people voted for Chocolate than Mint Chocolate Chip?</p> <p>How many people chose Chocolate, Banana and Vanilla altogether?</p> <p>There are 200 pupils in Key Stage 2 who chose their favourite hobbies.</p> <p>How many pupils chose each hobby?</p>	
<p>60 children were asked to choose their favourite vegetable from five options.</p> <p>carrots 10% cauliflower 10% cabbage 30% peas 20% sweetcorn 30%</p> <p>a) Work out the number of children who chose each vegetable.            b) How many more people chose peas than cauliflower?            Compare methods with a partner.            c) How many more people chose sweetcorn or cabbage than chose carrots?</p>	

Week 2\_Maths\_Lesson 2

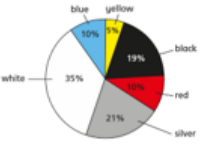
160 people were asked how many siblings they have. The results are shown in the pie chart.



How many people had:

0 siblings: \_\_\_\_\_  
 1 sibling: \_\_\_\_\_  
 2 siblings: \_\_\_\_\_  
 3 siblings: \_\_\_\_\_  
 4 siblings: \_\_\_\_\_  
 5 siblings: \_\_\_\_\_

The pie chart shows the colours of cars in a car park on one day. There were 30 yellow cars.



a) How many cars were in the car park in total?  
 b) Complete the table.

Colour of car	Frequency
yellow	30
black	
red	
silver	
white	
blue	