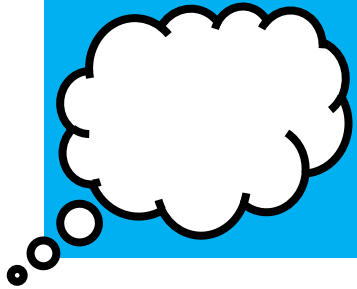


## Lesson 4

**L.O: I am learning to read and interpret pie charts.**



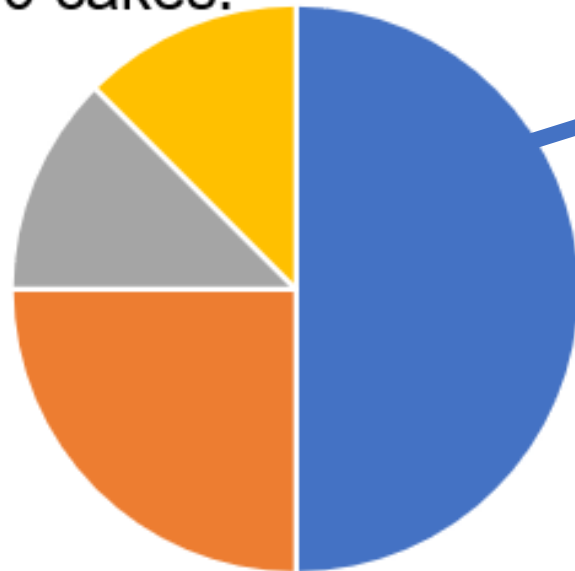
# Discuss with an adult/sibling

This is a pie chart that shows the number and type of cakes that a bakery produced over one month.

If the bakery produced 240 cakes.  
How many cakes were:

- a) chocolate
- b) sponge
- c) carrot
- d) fruit?

Explain your working out.



The whole 'pie' is 240.  
Chocolate is half of the 'pie'.  
Half of 240 is \_\_\_\_\_

■ chocolate ■ sponge ■ carrot ■ fruit

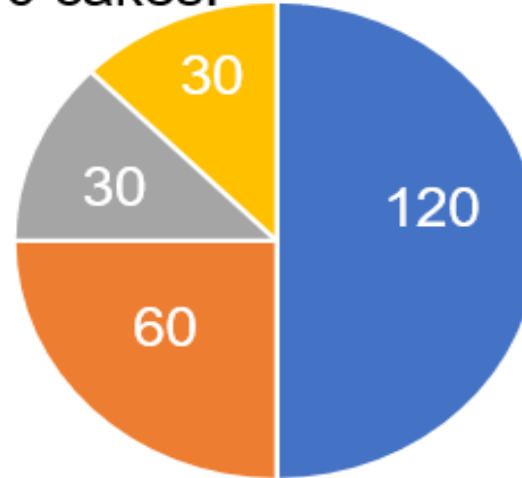
→ KEY

# Answers:

This is a pie chart that shows the number and type of cakes that a bakery produced over one month.

If the bakery produced 240 cakes.  
How many cakes were:

- a) chocolate 120
- b) sponge 60
- c) carrot 30
- d) fruit? 30





Explain your working out.

■ chocolate ■ sponge ■ carrot ■ fruit

Half of the pie chart is 'chocolate' cake, so half of 240 is 120.  
Sponge cake is a quarter of the pie chart, so half of 120 = 60.  
The final two pieces of the pie chart are eighths (half of a quarter).  
Half of 60 is 30. Check –  $120 + 60 + 30 + 30 = 240$  cakes.

# A helpful video

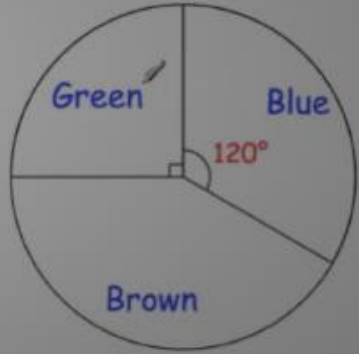
reading-pie-charts-mov  SHARE



 Corbett Maths primary

## Pie Charts

This pie chart shows the eye colours of 24 people

Which eye colour is the least common?



0:00 / 2:37 HD  

<https://corbettmathsprimary.com/2018/07/31/reading-pie-charts/>

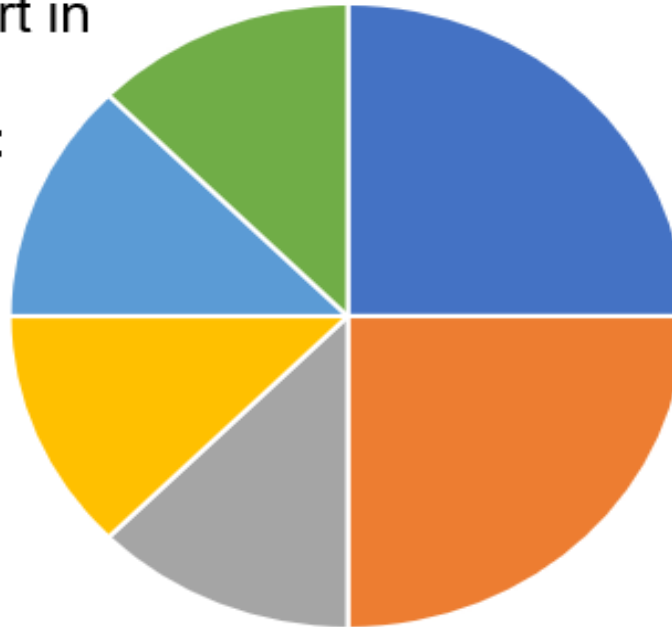
# Pie Chart

Key Stage 2 children were asked to choose their favourite healthy snack from a list. Here are the results.

360 children took part in the survey

How many voted for:

- a) grapes
- b) banana
- c) red apples
- d) none of the three listed above?



■ grapes ■ banana ■ satsuma ■ pear ■ kiwi fruit ■ red apples

Explain how you know.

# Answers: Pie Chart

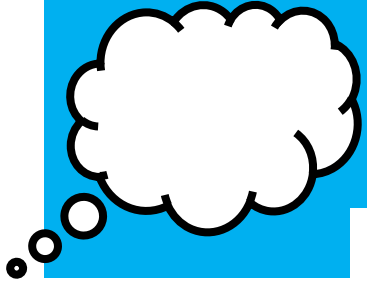


■ grapes ■ banana ■ satsuma ■ pear ■ kiwi fruit ■ red apples

360 children took part in the survey  
How many voted for:

- a) grapes 90
- b) banana 90
- c) red apples 45
- d) none of the three listed above?  
135

Grapes and bananas are the same amount because they are one quarter of the pie chart. One quarter of 360 = 90. The rest are eighths or quarters that have been halved. Half of 90 = 45 (red apples). That leaves the other three. A quarter of the pie chart added to one eighth of it =  $90 + 45 = 135$ .



# Comparing and Interpreting

Same chart, different numbers - milkshakes

Key Stage 1 120 children



■ strawberry ■ banana ■ chocolate ■ vanilla

What fraction of Key Stage 1 children chose strawberry as their favourite?

Key Stage 2 240 children



■ strawberry ■ banana ■ chocolate ■ vanilla

How many more Key Stage 2 children chose banana rather than vanilla?

How many children chose chocolate across Key Stage 1 and Key Stage 2?

# Answers: Comparing and Interpreting

Same chart, different numbers - milkshakes

Key Stage 1 120 children



■ strawberry ■ banana ■ chocolate ■ vanilla

What fraction of Key Stage 1 children chose strawberry as their favourite?  **$1/8$**  (half of  $1/4$ )

Key Stage 2 240 children



■ strawberry ■ banana ■ chocolate ■ vanilla

How many more Key Stage 2 children chose banana rather than vanilla?  **$60 - 30 = 30$**

How many children chose chocolate across Key Stage 1 and Key Stage 2? **180**  
Half of 120 = 60, plus half of 240 (120).  $120 + 60 = 180$ .



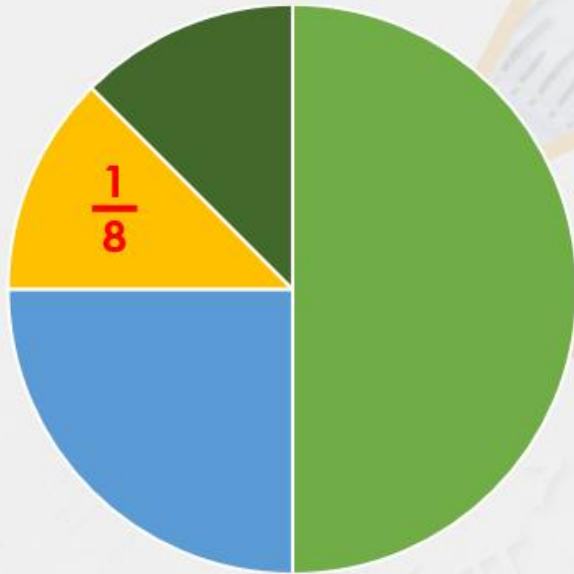


# Using Fractions or amounts

What fraction of the pie chart represents people who chose dolphins?

Favourite Animal

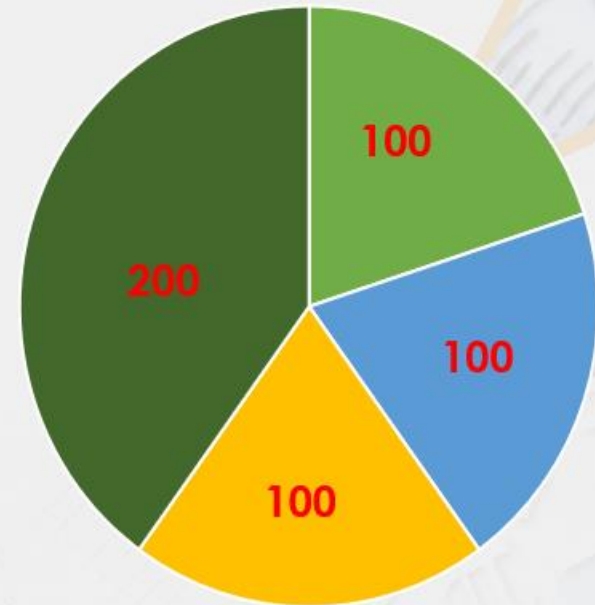
- Lions
- Horses
- Dolphins
- Owls

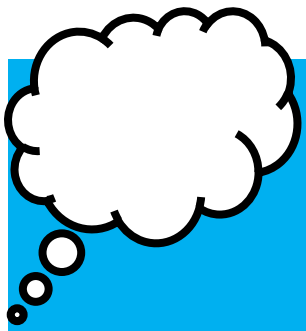


500 people took part in a survey about sport.  
How many people does each segment represent?

Favourite Sport

- Rugby
- Swimming
- Basketball
- Football





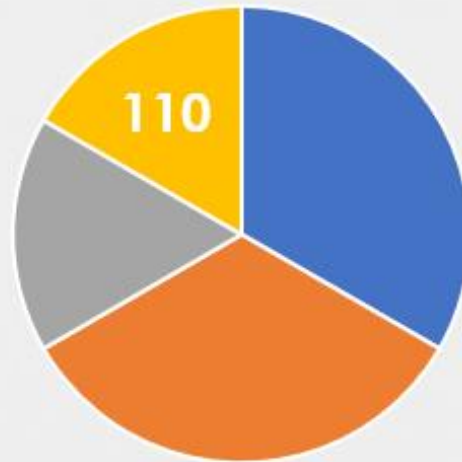
# Reasoning

Nancy says,



I do not have enough information to work out the total number of votes.

Favourite  
Snack



- Sweets
- Crisps
- Popcorn
- Fruit

Is she correct? Prove it.

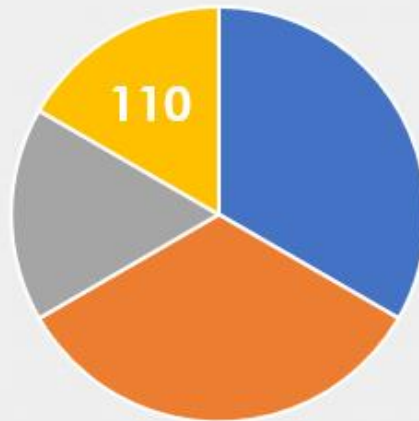
# Answer: Reasoning

Nancy says,



I do not have enough information to work out the total number of votes.

Favourite  
Snack



- Sweets
- Crisps
- Popcorn
- Fruit

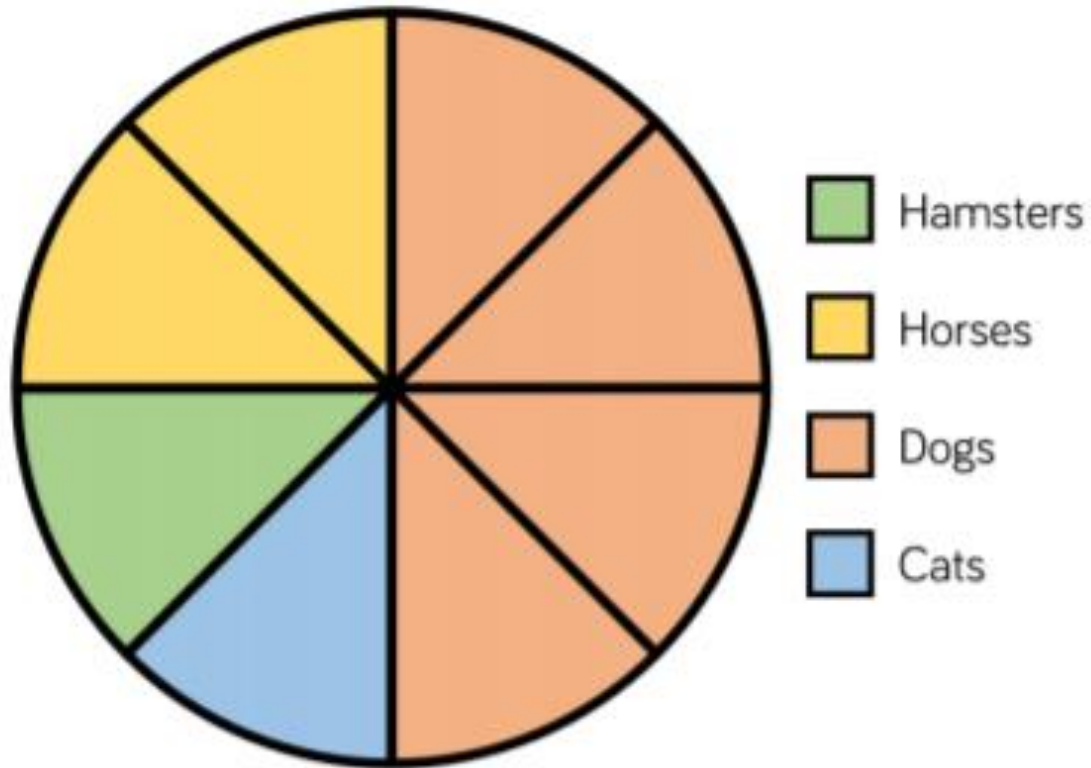
Is she correct? Prove it.

**Nancy is not correct because 110 people represent one sixth of the voters so 660 people must have voted altogether.**

# Problem Solving

96 people took part in this survey.

Our favourite pets



How many people voted for cats?

$\frac{3}{8}$  of the people who voted for dogs were male. How many females voted for dogs?

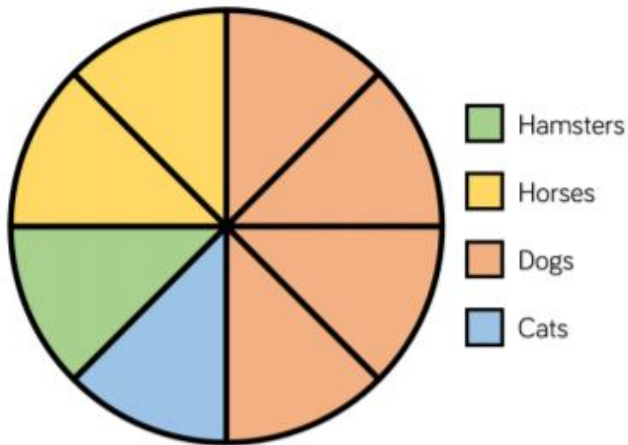
What other information can you gather from the pie chart?

Write some questions about the pie chart for your partner to solve.

# Answers: Problem Solving

96 people took part in this survey.

Our favourite pets



How many people voted for cats?

$\frac{3}{8}$  of the people who voted for dogs were male. How many females voted for dogs?

What other information can you gather from the pie chart?

Write some questions about the pie chart for your partner to solve.

$$\frac{1}{2} \text{ of } 96 = 48$$

$$\frac{1}{4} \text{ of } 96 = 24$$

$$\frac{1}{8} \text{ of } 96 = 12$$

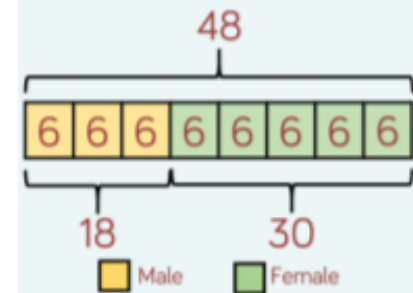
12 people voted cats.

48 people voted dogs.

$$\frac{1}{8} \text{ of } 48 = 6$$

$$6 \times 3 = 18.$$

18 females voted for dogs.



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 compete 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://corbettmathsprimary.com/2018/07/31/reading-pie-charts/>

Week 4\_Maths\_Lesson 4

### Lesson 4

L.O I am learning to read and interpret pie charts.

All	All of you <b>must</b> 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:

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#### Fluency

Key vocabulary: pie chart, data, graph, percentage, fraction, whole, part, section	Your answer
<p>2a. The pie chart shows the votes of 36 people. Find the missing value.</p> <p><b>Favourite School Subject</b></p> <p>☆</p>	
<p>5b. What fraction of the pie chart represents people who chose fantasy?</p> <p><b>Favourite Type of Book</b></p> <p>☆</p>	
<p>7a. 720 people took part in a survey about playing instruments. How many people does each segment represent?</p> <p><b>Musical Instruments</b></p> <p>☆</p>	

Week 4\_Maths\_Lesson 4

12a. How many people from the 880 surveyed chose each option?

**Favourite Pudding**

☆

#### Reasoning

Key vocabulary: pie chart, data, graph, percentage, fraction, whole, part, section	Your answer
<p>3b. Imagine a pie chart with the same proportions as the one below was drawn for a survey of 33 people.</p> <p>Would the 'Savoury' category have 11 people in it? Convince me.</p> <p><b>Sweet, Savoury or Spicy Food (24 people)</b></p>	
<p>1 Children from two schools were asked how they travel to school. The results are shown in the pie charts.</p> <p>Hockton Primary: 140 children Turkton Academy: 320 children</p> <p>a) More children from Hockton Primary walk to school because more pieces show 'walk'.</p> <p>Do you agree with Tommy? _____ Explain your answer.</p> <p>b) How many children from each school travel by car?</p>	

# Evaluation

Do you agree with Amber?

Favourite crisp flavours



- ready salted
- salt and vinegar
- prawn cocktail
- cheese and onion
- smoky bacon
- beef and onion

Amber

1/6 of the people surveyed chose ready salted.

# Evaluation Answer

## Do you agree with Amber?

Favourite crisp flavours



- ready salted
- prawn cocktail
- smoky bacon
- salt and vinegar
- cheese and onion
- beef and onion

Amber

1/6 of the people surveyed chose ready salted.

Amber is not correct.  
There are 6 sections in the pie chart, but two sections are larger, so ready salted cannot be  $1/6$ .  
Salt and vinegar =  $1/4$ .  
Cheese and onion =  $1/4$ .  
The other 4 flavours are half of a quarter or  $1/8$ , not  $1/6$ .