

Year 3 Maths – week beginning 4.5.2020

Theme	Graphs Lesson 1 Drawing picture graphs	Graphs Lesson 2 Drawing bar graphs	Graphs Lesson 3 Reading bar graphs	Graphs Lesson 4 Reading bar graphs	Graphs Lesson 5 Reading bar graphs
<b>Factual fluency (to aid fluency)</b>	Order the numbers <a href="#">game</a> Ordering – 0-999	Hit the multiples of 4 <a href="#">game</a> x 4	Hit the multiples of 8 <a href="#">game</a> x 8	Level 3 – Multiplication – mixed tables <a href="#">quiz</a> x2,x3,x4,x5,x8,x10	Level 3 – Multiplication – mixed tables <a href="#">quiz</a> x2,x3,x4,x5,x8,x10
<b>Problem/ activity of the day</b>	<p><b>Making links:</b> In Year 2, you learnt to draw and read information from picture graphs.</p> <p><b>Think:</b> Make a tally chart to find the total amount of each type of fruit.</p>  <p>Look at the different picture graphs representing the data of the amount of fruit. Two pupils are talking about the graph. Read what they are saying and decide who is correct.</p> <p><b>See (model below)</b> <b>See <a href="#">video clip</a></b></p> <p><b>Do:</b> Use the information below to draw a picture graph. You can choose how many pieces of fruit each picture represents.</p>	<p><b>Making links:</b> Yesterday you learned how to draw a picture graph.</p> <p><b>Think:</b> Look at the picture graph to show the amount of pets owned in a Year 4 class. Now look at the bar graph. What similarities and differences do you notice? Which is the largest group of pets and the smallest group of pets?</p> <p><b>See (model below)</b> <b>See <a href="#">video clip</a></b></p> <p><b>Do:</b> Use the information below to draw a bar graph.</p>	<p><b>Making links:</b> Yesterday you learned how to draw a bar graph.</p> <p><b>Think:</b> Look at the bar graph below showing Year 3's favourite ice-cream flavours. The class are disagreeing about the results, who do you think is correct? Can you come up with your own questions about the graph?</p> <p><b>See (model below)</b> <b>See <a href="#">video clip</a></b></p> <p><b>Do:</b> Answer the questions about the graph.</p>	<p><b>Making links:</b> Yesterday you learned how to read and analyse a bar graph where the scale was counting in 1s.</p> <p><b>Think:</b> How is the bar graph below different to yesterdays? Will it be harder to read the value or easier? Think about the statements, do you agree?</p> <p><b>See (model below)</b> <b>See <a href="#">video clip</a></b></p> <p><b>Do:</b> Answer the questions about the graph.</p>	<p><b>Making links:</b> Yesterday you learnt to read bar graphs where the scale was counting in 5s.</p> <p><b>Think:</b> Look at the bar graph below showing the number of pupils who like different fruits. Three pupils are talking about the graph. Read what they are saying and decide whose statements are all correct?</p> <p><b>See (model below)</b> <b>See <a href="#">video clip</a></b></p> <p><b>Do:</b> Answer the questions about the graph.</p>
<b>Time to check</b>	Check the answer sheet below.	Check the answer sheet below.	Check the answer sheet below.	Check the answer sheet below.	Check the answer sheet below.

**See below for resources to support you to THINK-SEE-DO**

**DAY 1 RESOURCES:**

**THINK:**

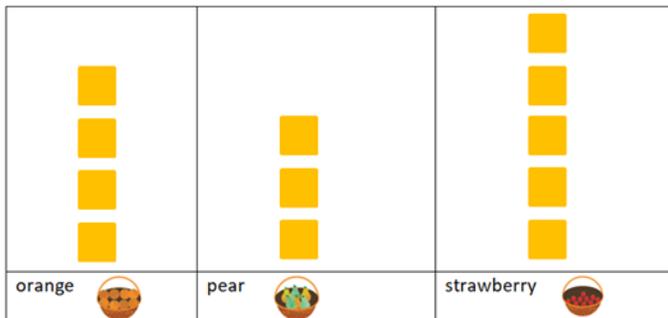
Number of Fruits in the Basket



Each  stands for one fruit.

Here is a **different** picture graph to represent the data:

Number of Fruits in the Basket



Each  stands for 2 fruits.

Two pupils are talking about the graph.

Naima says, "The square represents 2 fruits so there are 8 oranges."

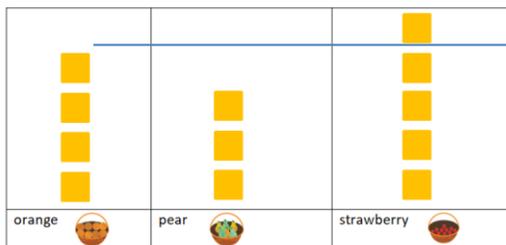
Alex says, "The square represents 2 fruits so there are 9 oranges."

Who is correct and why?

**SEE:** [Optional video link here](#)

Here is a **different** picture graph to represent the data:

Number of Fruits in the Basket



Each  stands for 2 fruits.

Naima is correct because there are 4 squares and each square represents 2 fruits.  
 $4 \times 2 = 8$  and there are 8 oranges in total.

**DO:**

This table shows the number of different chocolate bars bought in a shop.

Look at the table and complete the picture graph below.

Types of chocolate bars	Number of chocolate bars bought
Mars Bar	10
Twix	8
Snickers	8
Dairy Milk	2

Number of Different Chocolate Bars in a Shop



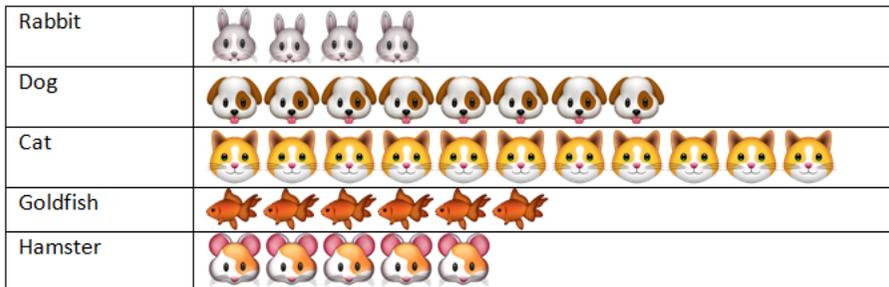
You can choose how many chocolate bars each picture stands for.

Deepening challenge: Can you create different picture graphs to show the same information?

**DAY 2 RESOURCES:**

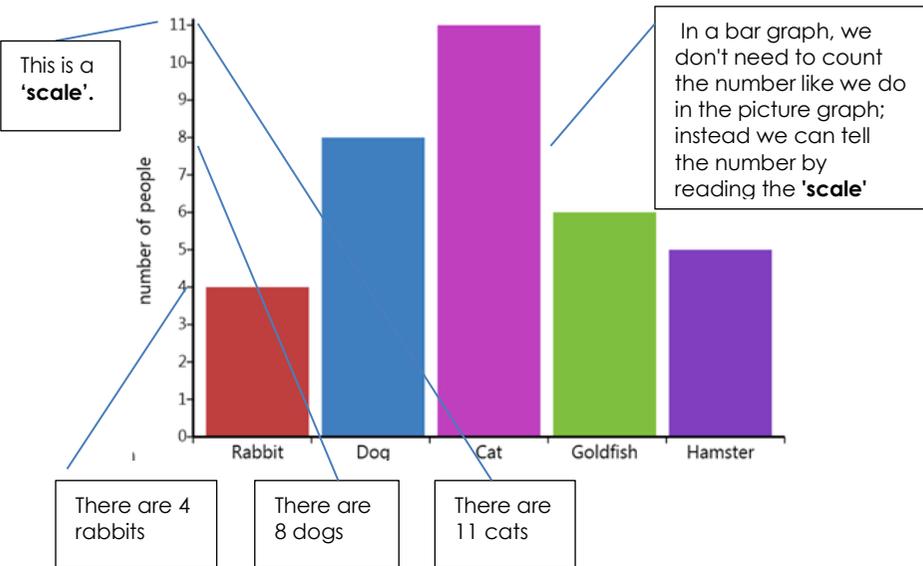
**THINK:**

Picture graph to show amount of pets owned in a Year 4 class



Each emoji stands for 1 pet.

Bar graph to show amount of pets owned in a Year 4 class



**SEE:** [Optional video link here](#)

A **similarity** between the picture graph and bar graph is that they both represent the same information.

The **difference** is that a picture graph uses pictorial objects to show data whereas a bar graph uses bars and a scale to count the amount.

The **largest** group of pets are cats because the scale says 11 cats are owned.

The **smallest** group of pets are rabbits because the scale says 4 rabbits are owned.

**DO:**

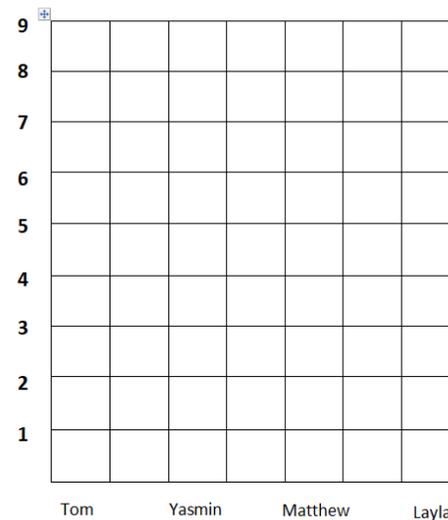
This table shows the number of mini Easter eggs eaten by each child.

Look at the table and complete the bar graph below.

child	number of mini Easter eggs eaten
Tom	4
Yasmin	5
Matthew	3
Layla	7

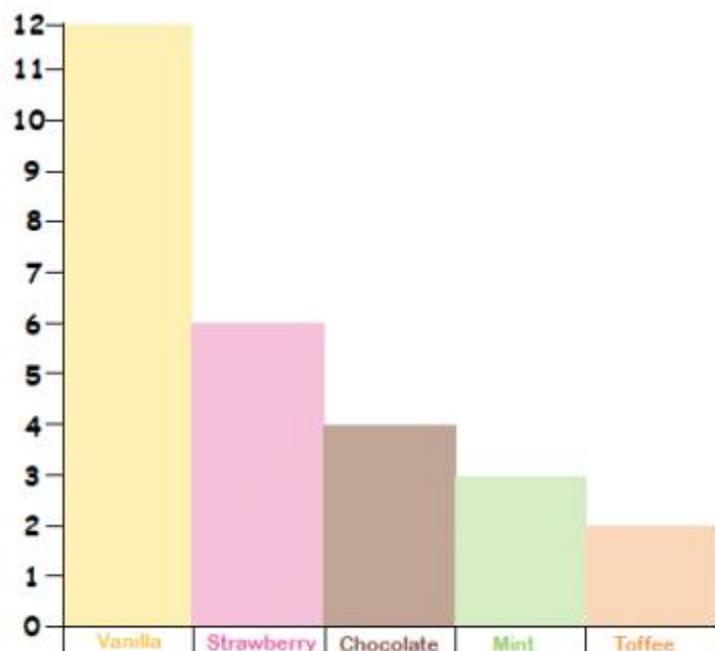
Draw a bar graph to show the amount of mini Easter eggs eaten by each child.

Number of mini Easter eggs eaten



## DAY 3 RESOURCES:

### THINK:



Zeynep believes that Strawberry is the most popular flavour whilst Isla thinks Vanilla is most popular. Who is correct?

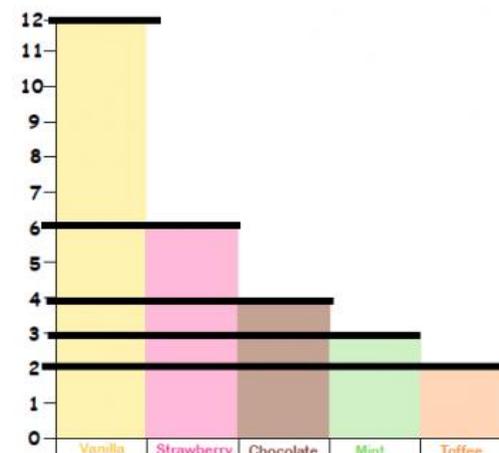
Vincent thinks that more children like Strawberry than Chocolate and Mint combined. Is he correct?

Cyril believes that twice as many children like Chocolate than children like Toffee. Is he correct?

What is the difference between how many children like Mint compared to Vanilla? Lisa thinks the answer is 8.

### SEE: (see optional [video clip](#))

First, using a ruler or a folded piece of paper, work out the value of each bar.



Vanilla = 12, Strawberry = 6, Chocolate = 4, Mint = 3, Toffee = 2.  
Write these down to help you solve the questions.

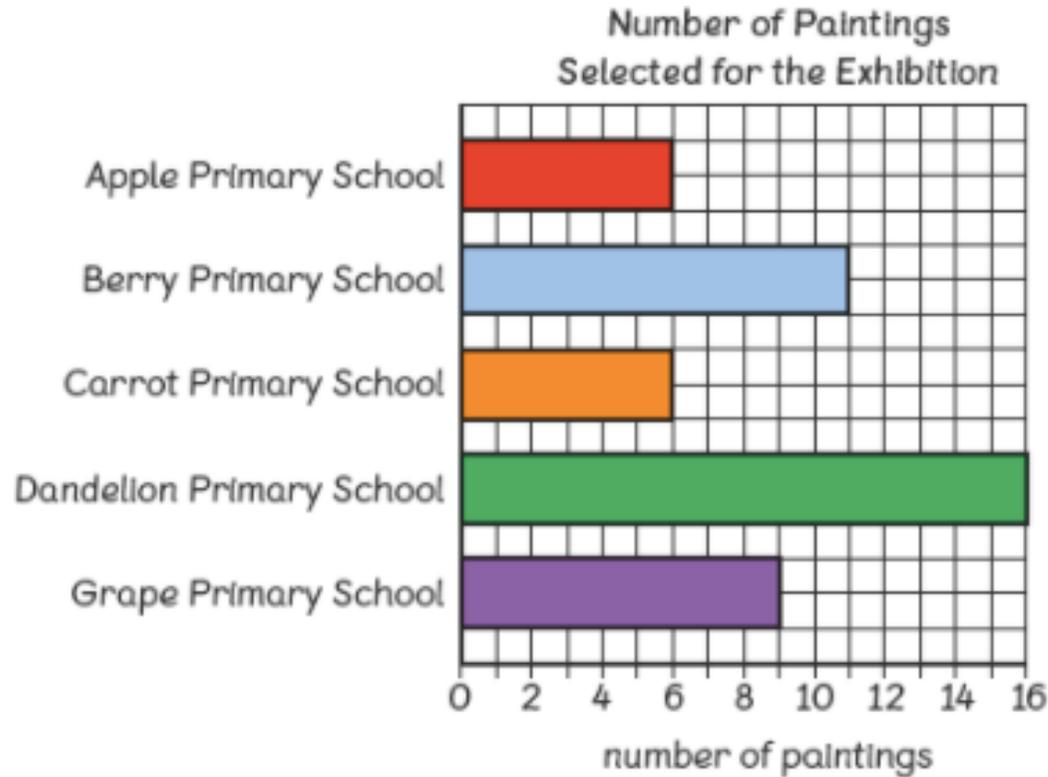
Popular means the one that the **most** people like. 12 children prefer Vanilla, and only 6 children prefer Strawberry. Therefore, Isla is correct.

Let's look at Vincent's problem. 6 children like Strawberry. 4 like Chocolate and 3 like Mint so  $4 + 3 = 7$ .  
 $6 < 7$  so Vincent is incorrect.

Let's look at Cyril's problem. 4 children like Chocolate when 2 like Toffee.  
4 is twice as many as 2, so Cyril is correct.

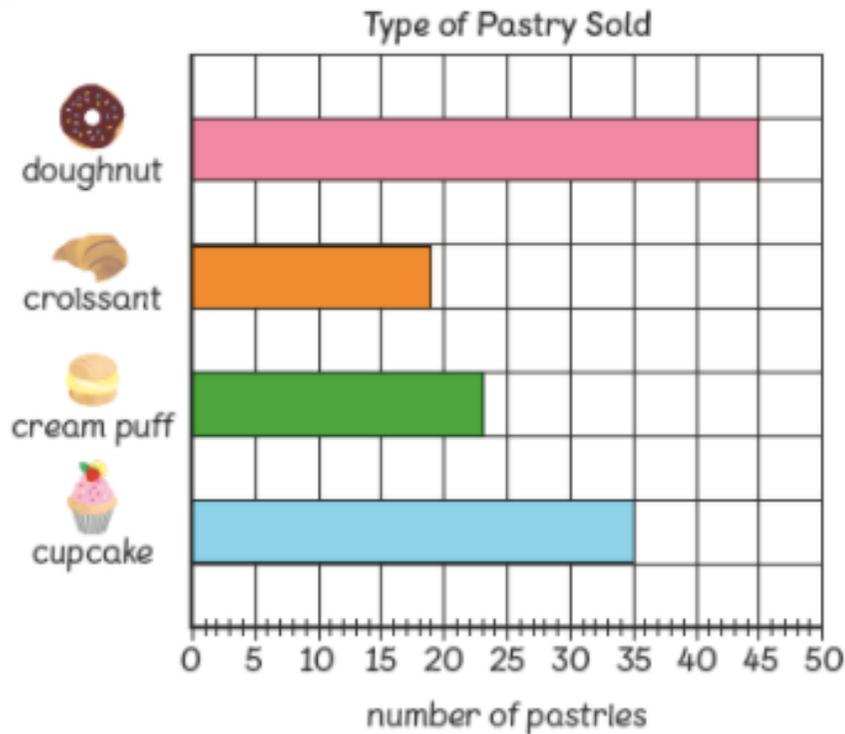
'What is the difference' can be tricky! You could also say 'how many more children like' Vanilla compared to Mint.  
12 children prefer Vanilla, whilst 3 children like Mint.  
 $12 - 3 = 9$   
Lisa is incorrect, the difference between the two is 9.

DO:



1. There are missing numbers on the x axis (the 'number of paintings' line). Can you add them in? How much is the scale counting in?
2. How many paintings does Carrot Primary have at the exhibition?
3. Which school has the fewest amount of paintings at the exhibition?
4. How many paintings do Apple Primary and Berry Primary have at the exhibition?
5. What is the difference between the amount of paintings Grape Primary has at the exhibition compared to Carrot Primary?

**THINK:**



How is this bar chart different to yesterday?  
 Femi has been baking up a storm this month! He showed this bar graph to his brother to show what he had baked.

His brother thinks that Femi has baked 40 doughnuts and 35 cupcakes. He also believes that the item he baked the least of was croissant.

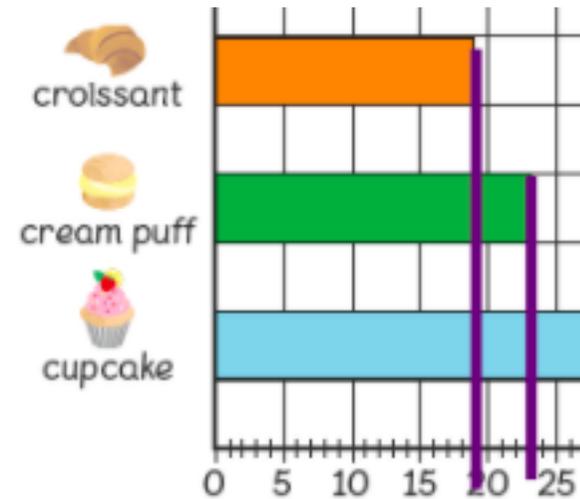
Is Femi's brother correct?

He wants to know how many more cupcakes Femi made than cream puffs.

**SEE:**

(see optional [video clip](#) here)

The scale of this bar graph is counting in 5s rather than 1s. Use the lines of the graph to find out how many doughnuts and cupcakes Femi baked. Doughnuts 45 and Cupcakes 35. Femi's brother was wrong about the doughnuts.



By drawing a line down to the x axis, you can work out how much each bar represents.

19 croissants and 23 cream puffs. Femi did cook the least croissant.

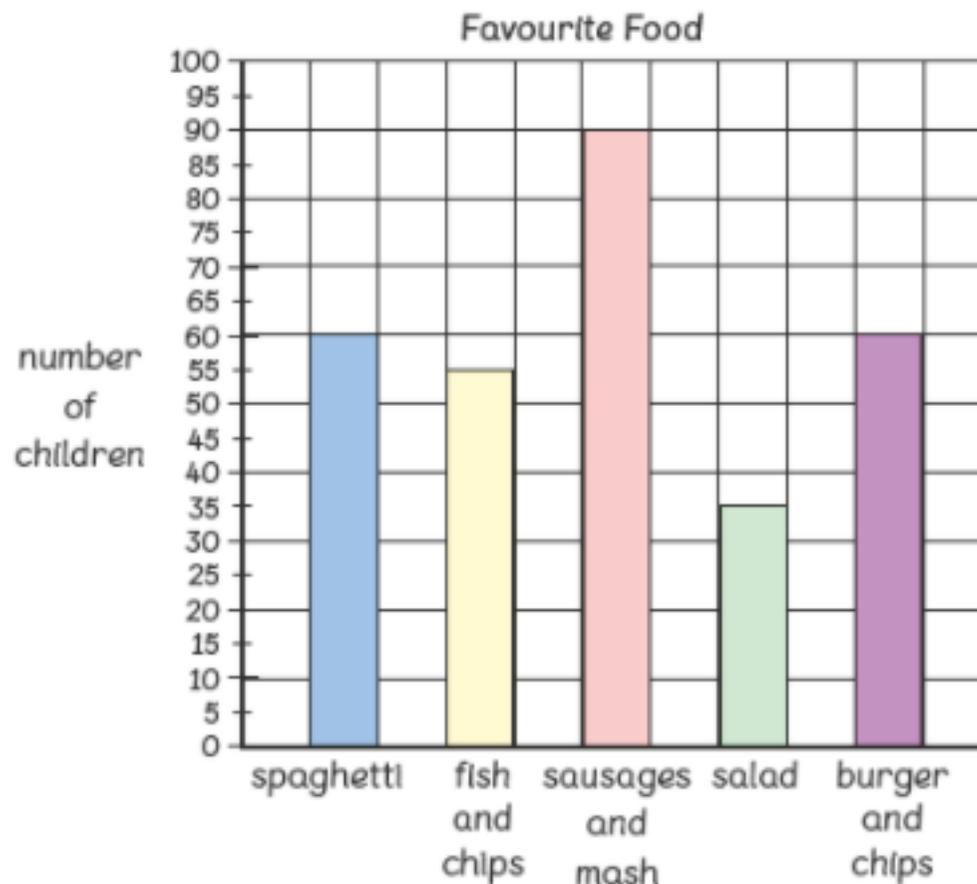
If Femi baked 35 cupcakes and 23 cream puffs, how many more cupcakes did he bake?

$$35 - 23 = 12$$

Femi baked 12 more cupcakes than cream puffs.

**DO:**

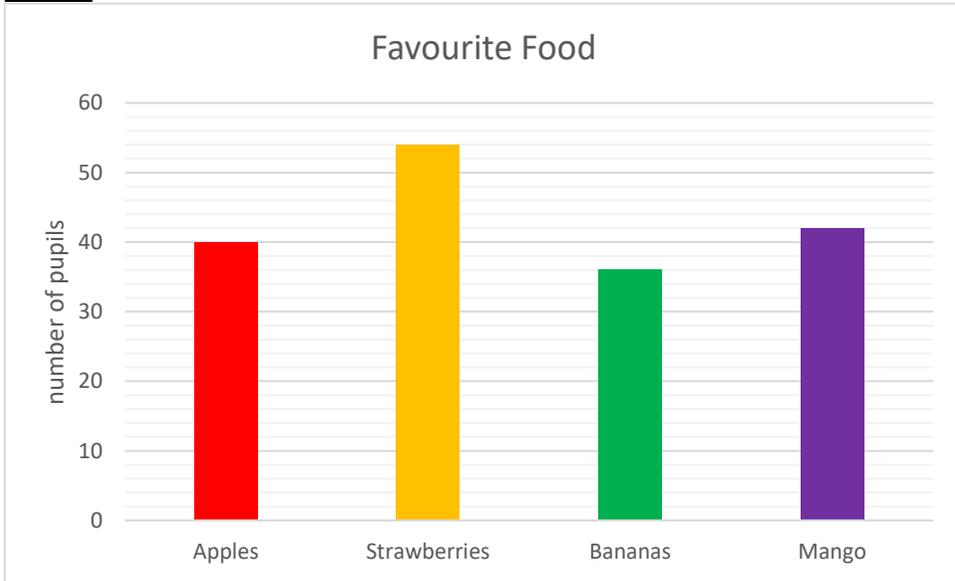
The bar graph shows the amount of children who prefer each food type.



1. Which type of food is the most popular?
2. How many children like salad?
3. How many children prefer fish and chips?
4. Do more children like spaghetti or salad? How many more?
5. Which two food groups do children like the same amount?
6. Twice as many children like sausages and mash compared to salad. Is this statement correct? Explain your answer.

**DAY 5 RESOURCES:**

**THINK:**



Three pupils are talking about the graph.

Alex says, "Most of the pupils like strawberries. The smallest number of pupils like mango."

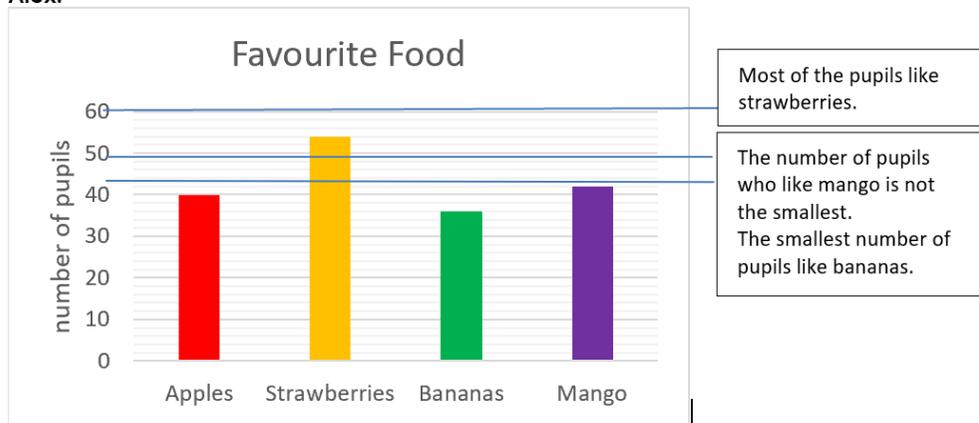
Margaret says, "14 more pupils like strawberries than like apples. Fewer than 40 pupils like bananas."

Zahir says, "38 pupils like bananas. More pupils like apples than like bananas."

Whose statements are all correct?

**SEE:** [Optional video clip here](#)

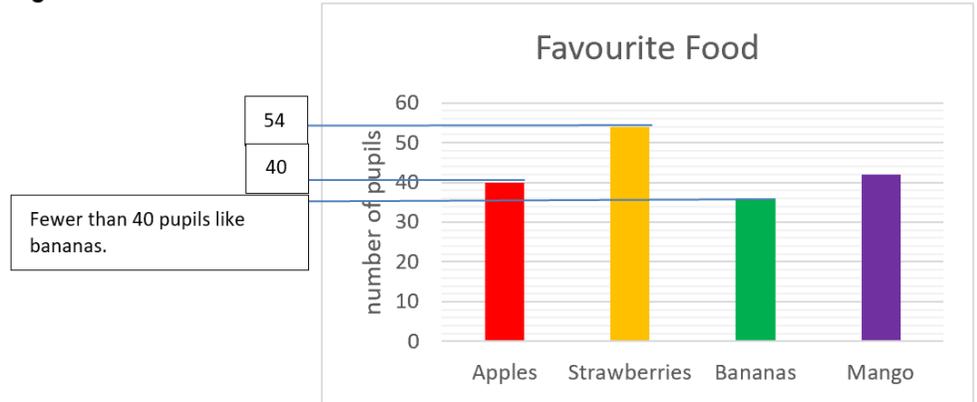
Alex:



Alex's statements are not all correct.

**SEE:**

Margaret:

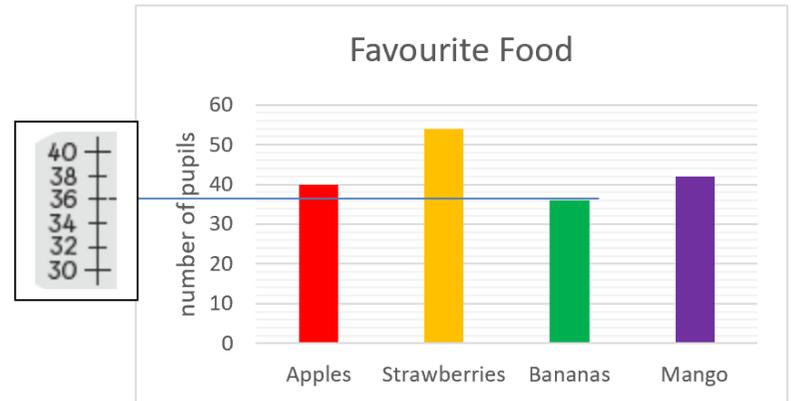


$$54 - 40 = 14$$

14 more pupils like strawberries than like apples.

Margaret's statements are all correct.

Zahir:



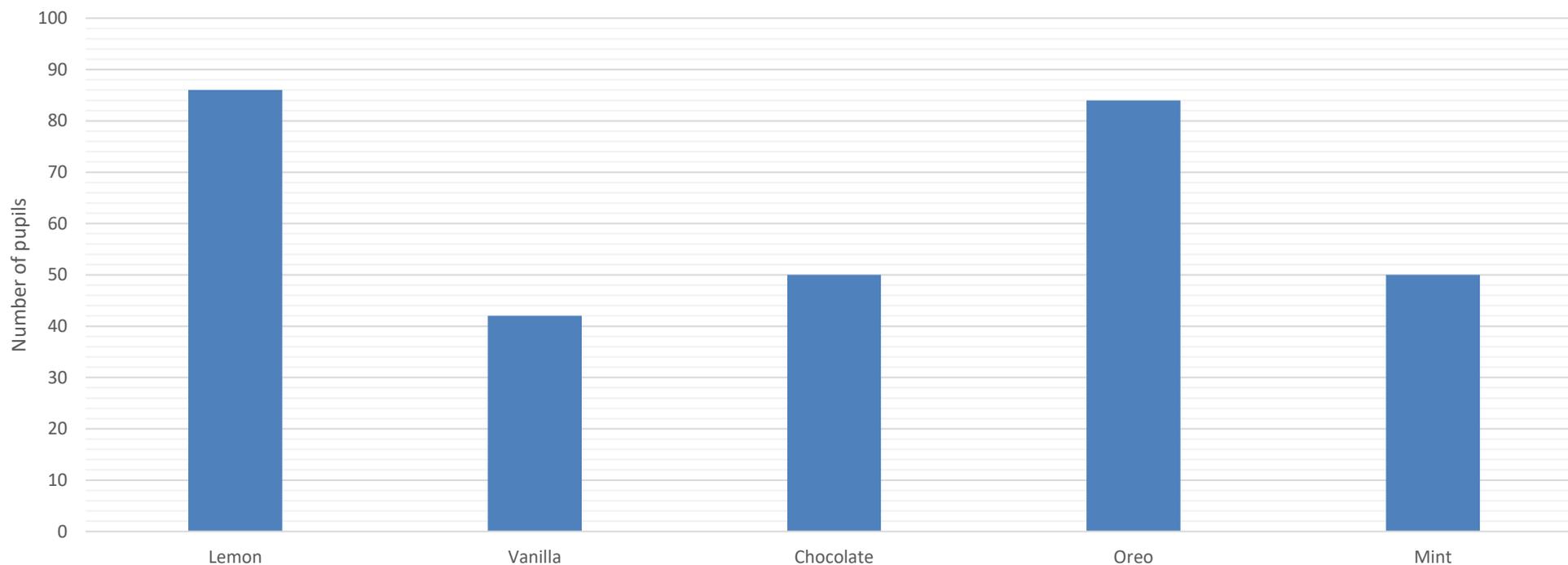
36 pupils like bananas, not 38.

More pupils like apples than like bananas.

Zahir's statements are not all correct.

**DO:**

Favourite Flavours of Ice Cream



1. How many children prefer vanilla ice cream?
2. How many children like oreo ice cream?
3. How many children like lemon and mint ice cream altogether?
4. Which flavour do most children prefer?
5. Which flavour do the least children prefer?
6. As many children like ..... as like .....
7. .... more children prefer oreo ice cream than chocolate ice cream.
8. .... fewer children prefer oreo ice cream than lemon ice cream.
9. Twice as many children like ..... as .....
10. How many children were asked their favourite flavour of ice cream altogether?

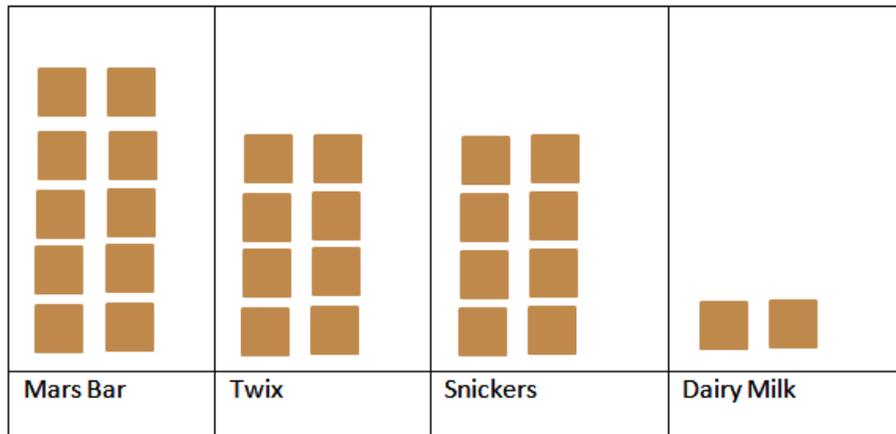
**DAY 1 ANSWERS:**

This table shows the number of different chocolate bars bought in a shop.

Look at the table and complete the picture graph below.

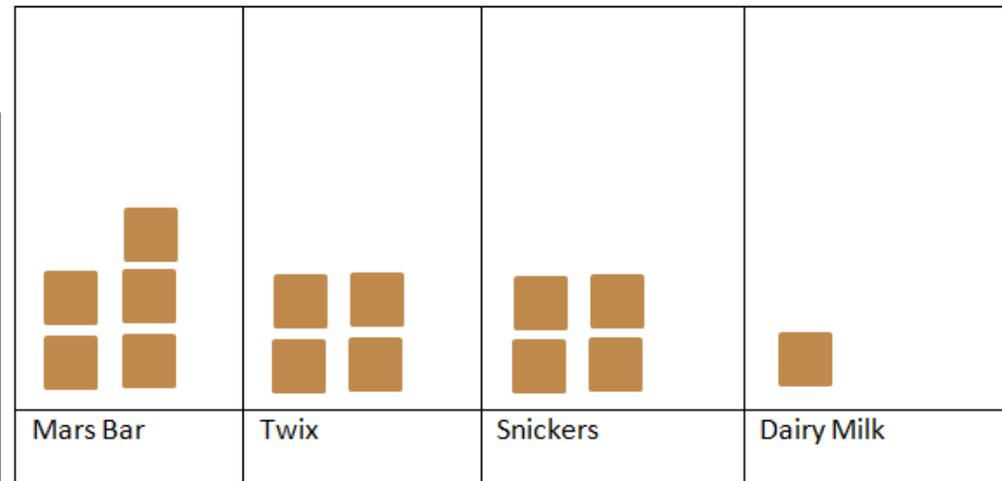
Types of chocolate bars	Number of chocolate bars bought
Mars Bar	10
Twix	8
Snickers	8
Dairy Milk	2

**Number of Different Chocolate Bars in a Shop**



Each  stands for 1 chocolate bar.

**Number of Different Chocolate Bars in a Shop**

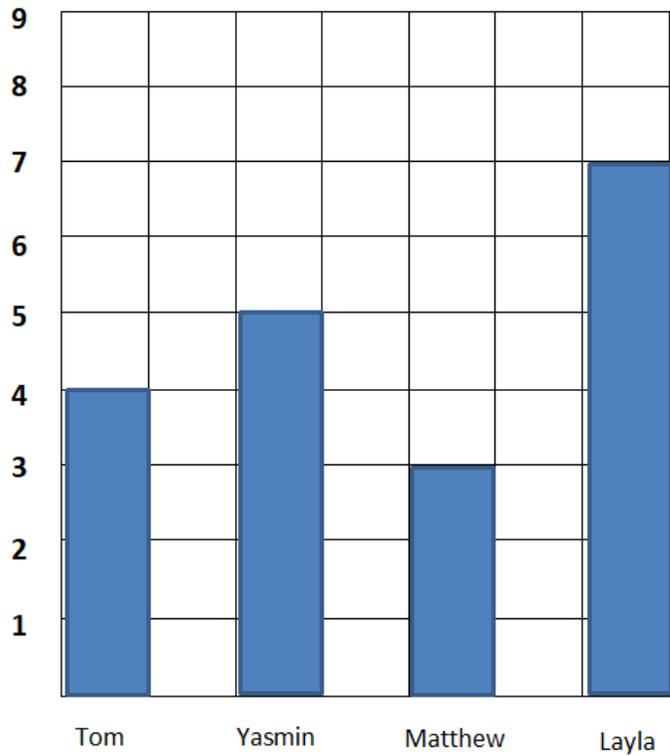


Each  stands for 2 chocolate bars.

**DAY 2 ANSWERS:**

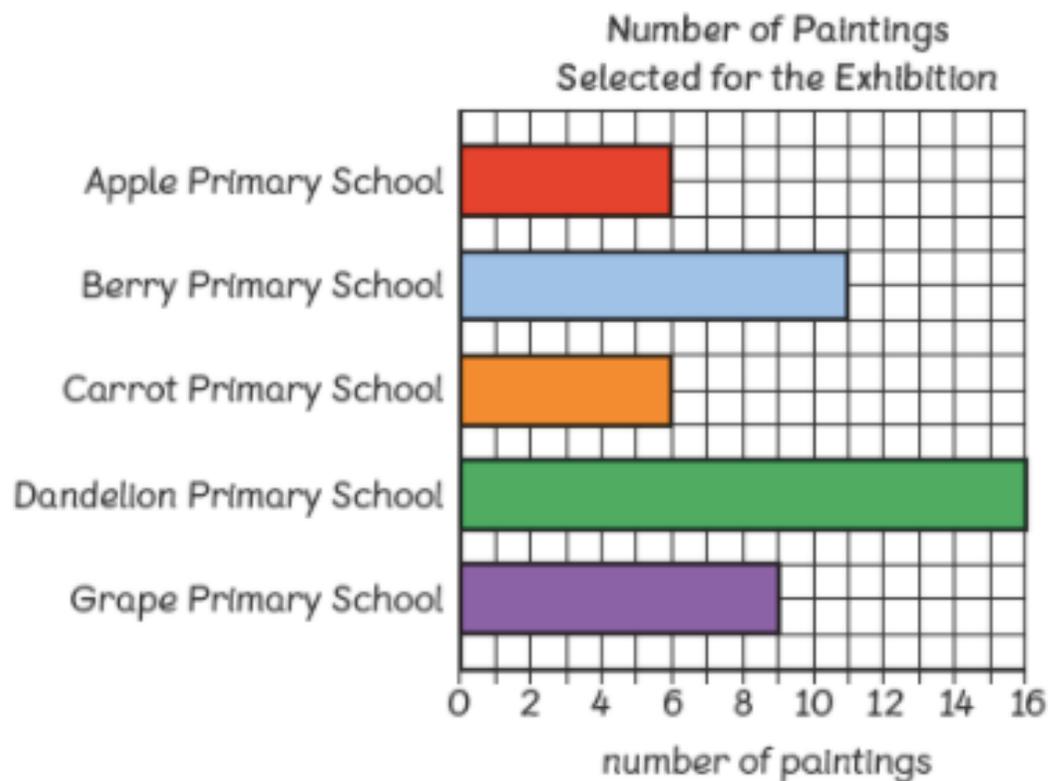
child	number of mini Easter eggs eaten
Tom	4
Yasmin	5
Matthew	3
Layla	7

**Number of mini Easter eggs eaten**



DAY 3 ANSWERS:

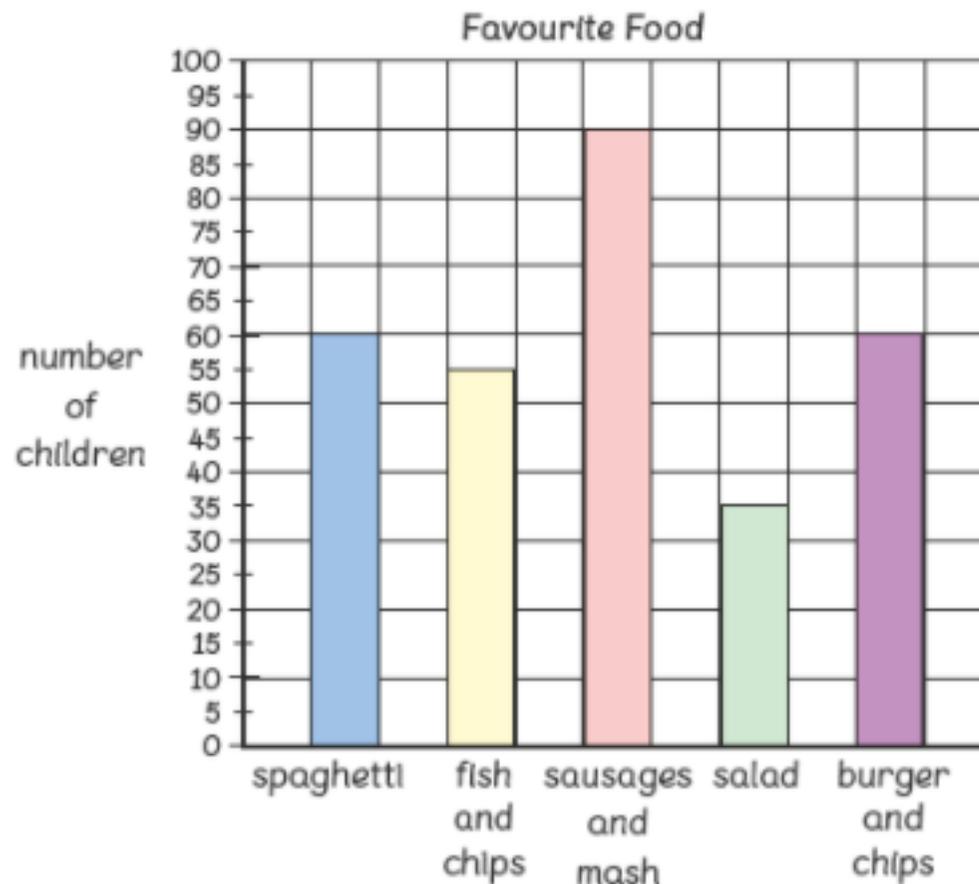
DO:



1. There are missing numbers on the x axis (the 'number of paintings' line). Can you add them in? How much is the scale counting in? **1, 3, 5, 7, 9, 11, 13, 15. The scale is counting in 1s, but only even numbers were written.**
2. How many paintings does Carrot Primary have at the exhibition? **6 paintings**
3. Which school has the most amount of paintings at the exhibition? **Dandelion Primary**
4. How many paintings do Apple Primary and Berry Primary have at the exhibition?  **$6 + 11 = 17$  paintings**
5. What is the difference between the amount of paintings Grape Primary has at the exhibition compared to Carrot Primary? **Grape = 9 and Carrot = 6.  $9 - 6 = 3$  paintings.**

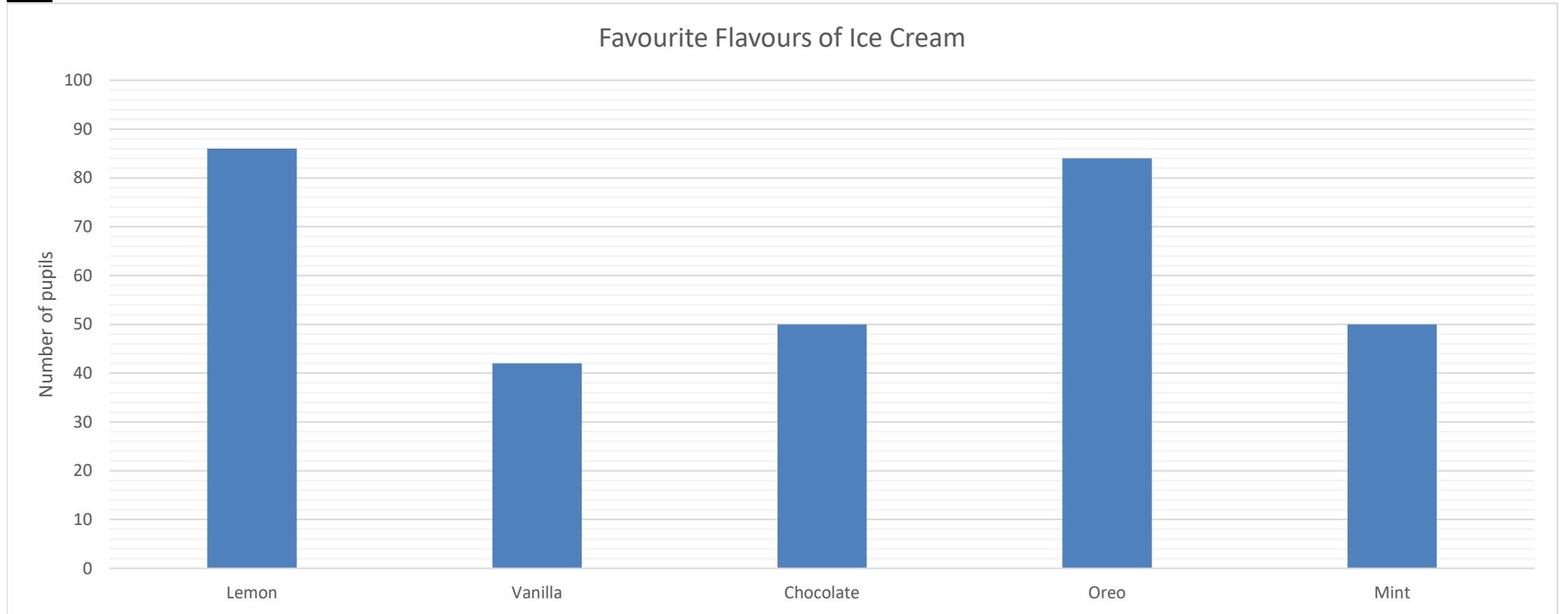
**DAY 4 ANSWERS:**

**DO:** The bar graph shows the amount of children who prefer each food type.



1. Which type of food is the most popular? **Sausages and mash**
2. How many children like salad? **35**
3. How many children prefer fish and chips? **55**
4. Do more children like spaghetti or salad? How many more? **More children like spaghetti.  $60 - 35 = 25$ . 25 more**
5. Which two food groups do children like the same amount? **Spaghetti and burger and chips**
6. Twice as many children like sausages and mash compared to salad. Is this statement correct? Explain your answer.  
**The statement is not correct.  $35 \times 2 = 70$  when 90 children like sausages and mash.**

**DO:**



1. How many children prefer vanilla ice cream? 42
2. How many children like oreo ice cream? 84
3. How many children like lemon and mint ice cream altogether? 136
4. Which flavour do most children prefer? Lemon
5. Which flavour do the least children prefer? Vanilla
6. As many children like chocolate ice cream as like mint ice cream.
7. 34 more children prefer oreo ice cream than chocolate ice cream.
8. 2 fewer children prefer oreo ice cream than lemon ice cream.
9. Twice as many children like oreo ice cream as vanilla ice cream.
10. How many children were asked their favourite flavour of ice cream altogether? 312