

Explain why he is correct.


2
100 girls and 50 boys were asked which kind of chocolate they like best.
These two pie charts show the results.



50 boys

Dev says:
"The pie charts show that more girls than boys liked milk chocolate best."
Dev is correct.
Explain how you know.


1 mark

3 The graph shows the heights of 28 children in Alfie's class, to the nearest centimetre.


Alfie is 153 cm tall.
He says,
'Only one person in my class is taller than I am.'

Emma says,

## 'You can't tell this from the graph.'

Explain why Emma is correct.


1 mark

4
Liam did a survey of 55 people to see how many were left-handed.
Liam says,
'The results show that exactly 10\% of the people in the survey are left-handed.'

Explain why Liam cannot be correct.


Amy did a survey of what time people get up on a Sunday morning. This table shows her results for 150 people.

| Time | number of people |
| :--- | :---: |
| before 7 am | 13 |
| $7: 00 \mathrm{am}$ to $7: 59 \mathrm{am}$ | 28 |
| $8: 00 \mathrm{am}$ to $8: 59 \mathrm{am}$ | 59 |
| $9: 00 \mathrm{am}$ to $9: 59 \mathrm{am}$ | 36 |
| 10 am and after | 14 |

Look at the table.
How many people get up at $\mathbf{8}$ am or later?


Amy says,
'Two-thirds of the 150 people in the survey get up before 9 am.'
Amy is correct.
Explain how you know.


Anna says $\frac{4}{7}$ is greater than $\frac{5}{9}$
Explain why Anna is correct.


7
A survey was done to find out children's favourite season.
This chart shows the results.


How many more children chose autumn than chose spring?

Kirsty says,

## 'Exactly twice as many children chose summer as chose winter.'

Is Kirsty correct?
Circle Yes or No.
Yes / No
Explain how you know.



Holly says,

## 'One-third of this shape is shaded'.

Is Holly correct?
Circle Yes or No.
Yes / No
Explain how you know.


9 If you know $\mathbf{4 0 \%}$ of a number, explain how you could work out the original number.


10 Sarah has a packet of balloons.


The contents of the packet are
5 red balloons
5 blue balloons
10 yellow balloons
Sarah says,

## 'One-quarter of the balloons are red'.

Is Sarah correct?
Circle Yes or No.
Yes / No
Explain how you know.


11
40 children predicted who would win the boys' race at sports day.
This pie chart shows their predictions.


What percentage of the children predicted that Stefan would win?


1 mark

10 children predicted the winner of the race correctly.
Who won the race?


Explain how you know.


12
Hassan scores 40 out of 80 in a test.
Kate scores $40 \%$ in the same test.
Who has the higher score?
Circle Hassan or Kate.

> Hassan / Kate

Explain how you know.


13 Here is a sorting diagram with four sections, $\mathbf{A}, \mathbf{B}, \mathbf{C}$ and $\mathbf{D}$.

|  | multiple of 10 | not a multiple of <br> 10 |
| :---: | :---: | :---: |
| multiple of 20 | $\mathbf{A}$ | $\mathbf{B}$ |
| not a multiple of <br> 20 | C | D |

Write a number that could go in section $\mathbf{C}$.

Section B can never have any numbers in it.
Explain why.


14
All the children at Park School chose their favourite soup.
The graph shows the results.


How many more children chose chicken soup than mushroom soup?


Robbie says,
'More than half of the children chose tomato soup'.
Is he correct?
Circle Yes or No.
Yes / No
Explain how you can tell from the graph.


15
Which is larger, $\frac{1}{3}$ or $\frac{2}{5} ?$


Explain how you know.


1 mark

16
Carol went on a 40-kilometre cycle ride.
This is a graph of how far she had gone at different times.


How many minutes did Carol take to travel the last $\mathbf{1 0}$ kilometres of the ride?

Use the graph to estimate the distance travelled in the first $\mathbf{2 0}$ minutes of the ride.


Carol says,
'I travelled further in the first hour than in the second hour'.
Explain how the graph shows this.


1 mark

17 Here is a table of the pets owned by six children.

| Name of child | Cat | Dog | Bird | Rabbit |
| :--- | :---: | :---: | :---: | :---: |
| David | 3 | 1 | 0 | 0 |
| Julie | 0 | 0 | 1 | 2 |
| Carl | 2 | 0 | 0 | 1 |
| Terry | 0 | 1 | 0 | 1 |
| Mary | 0 | 2 | 0 | 0 |
| Hawa | 1 | 0 | 1 | 1 |

Here is a graph of the pets of five of the children.


The pets of one of the children are not on the graph.
Whose pets are not on the graph?
$\qquad$

Explain how you know.



This is a chart of the money they collected.


Estimate how much Sheena collected.


1 mark

Together Gary and Pip collected more than £60
Explain how the chart shows this.


19 Kelly chooses a section of a newspaper.
It has $\mathbf{5 0}$ words in it.
She draws a bar chart of the number of letters in each word.


What fraction of the 50 words have more than 6 letters?

Kelly says,
23 of the 50 words have less than 5 letters. This shows that nearly half of all the words used in the newspaper have less than 5 letters in them.

Explain why she could be wrong.


