Year 6 – Summer Block 3 – Statistics

12th May 2020

Part 3: Reasoning & Problem Solving

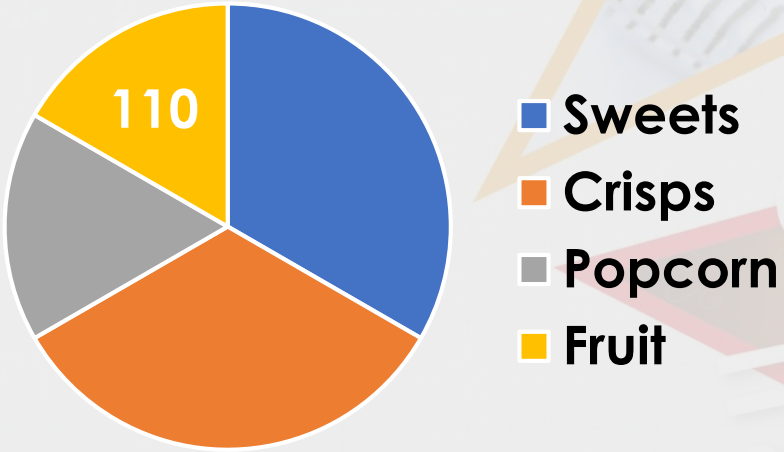
WALT Read and Interpret Pie Charts

See my green notes to help you.

Nancy says,

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

Favourite Snack

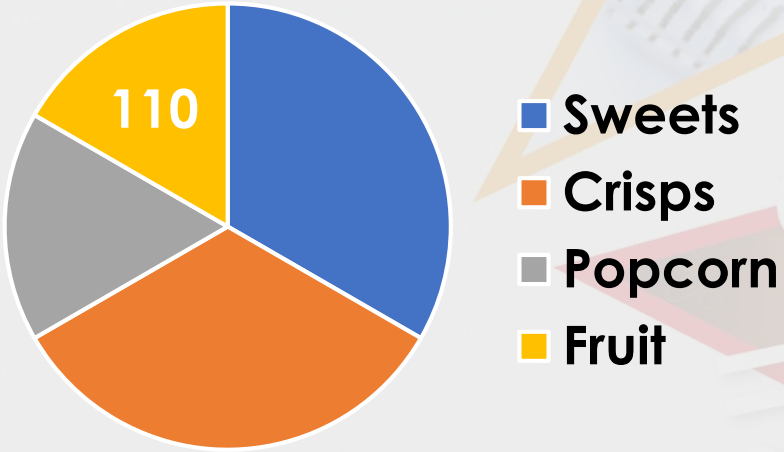


Is she correct? Prove it.

Nancy says,

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

Favourite Snack



Is she correct? Prove it.

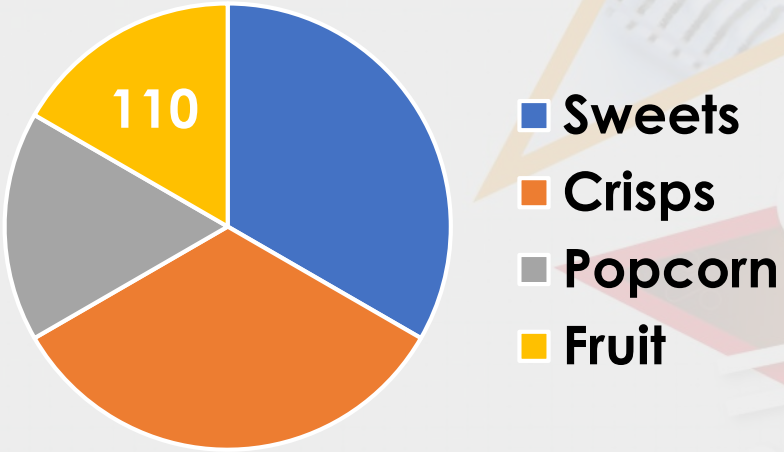
Nancy is not correct because…

Reasoning 1

Nancy says,

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

Favourite Snack



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. *(110X6)*

Problem Solving 1

Dante has forgotten what fraction of the pie chart should be given to 'Blue'. Work out the fraction from the information below. ***Hint: Look at the total and consider what fraction of that number is represented by the red, green and pink totals. What fraction is left?***

Favourite Colour	
Red	100 people
Green	50 people
Pink	100 people
Blue	?
Total	**400 people**

Problem Solving 1

Dante has forgotten what fraction of the pie chart should be given to 'Blue'. Work out the fraction from the information below. *50 people = 1/8, so 150 must represent 3/8.*

Favourite Colour	
Red	100 people
Green	50 people
Pink	100 people
Blue	150 people
Total	**400 people**

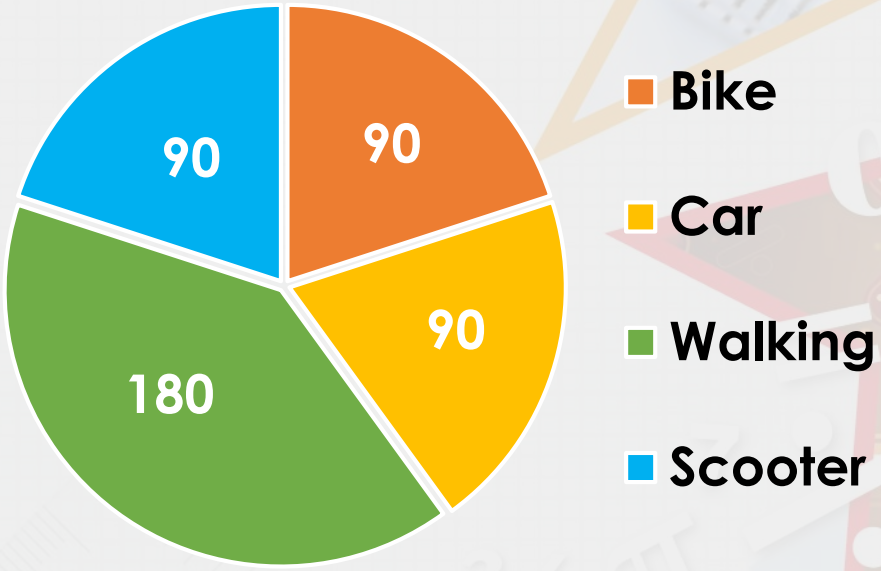
$\frac{3}{8}$

Reasoning 2

Imagine a pie chart with the same proportions as the one below was drawn for a survey of 600 people. ***Use this fraction to calculate the amount represented when the total number of people increases to 600.***

Would the 'Scooter' category have 100 people in it? Convince me.

How children get to school (450 people)

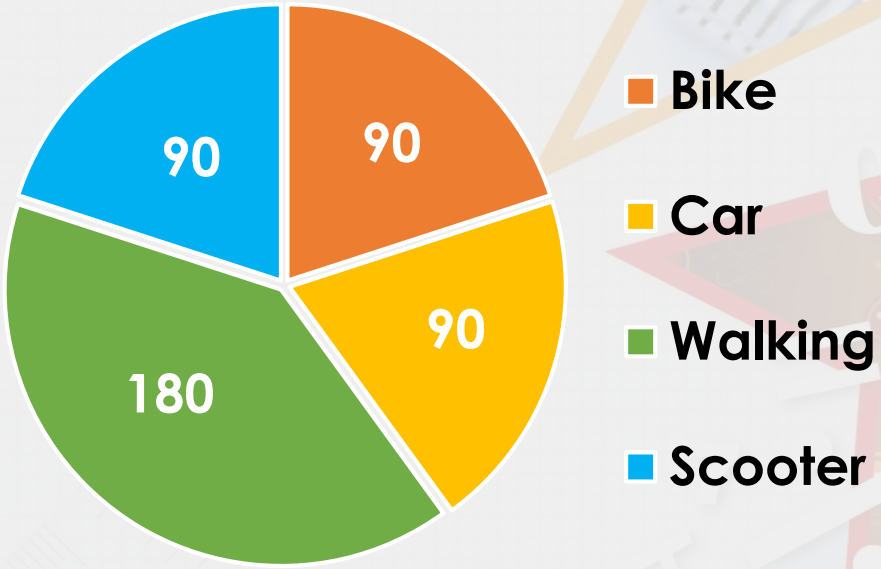


Reasoning 2

Imagine a pie chart with the same proportions as the one below was drawn for a survey of 600 people. Hint: What fraction of the circle does the 'scooter' option represent.

Would the 'Scooter' category have 100 people in it? Convince me.

How children get to school (450 people)



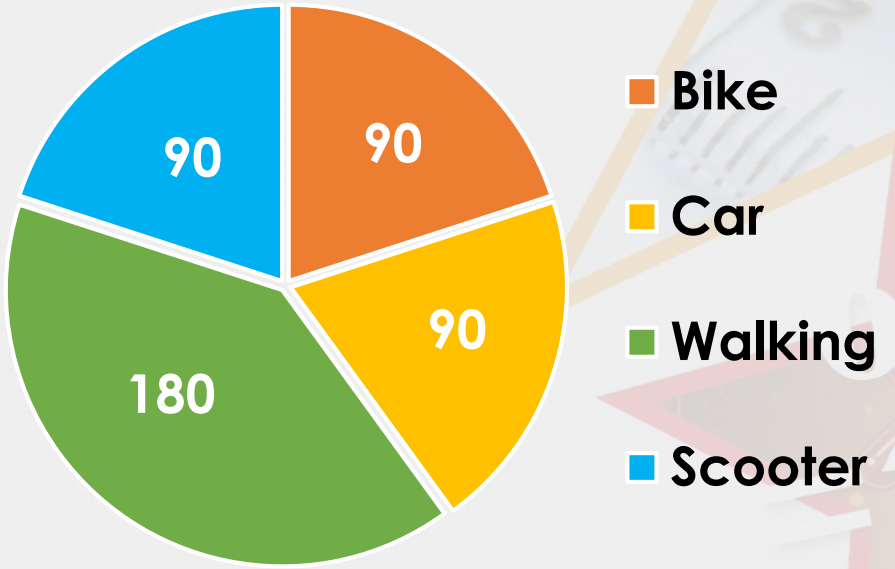
No because…

Reasoning 2

Imagine a pie chart with the same proportions as the one below was drawn for a survey of 600 people.

Would the 'Scooter' category have 100 people in it? Convince me.

How children get to school (450 people)



No because the 'Scooter' category in the chart of 450 people was selected 90 times. 90 out of 450 is one fifth. One fifth of 600 is 120, not 100.

Well done! It's over to you now.

Go to Part 4 and choose your Star Challenge! Normal rules apply: page 1 will give you an easier challenge, page 2 will be about the same as what we've just practised and page 3 will be more of a stretch.

You only need to do the first set of questions on your chosen Star Challenge – the 'A' questions. If you want extra practice, you can then do the next set of questions – the 'B' questions. When you finish, don't forget to mark your answers before sharing, so I can see where you need help.