

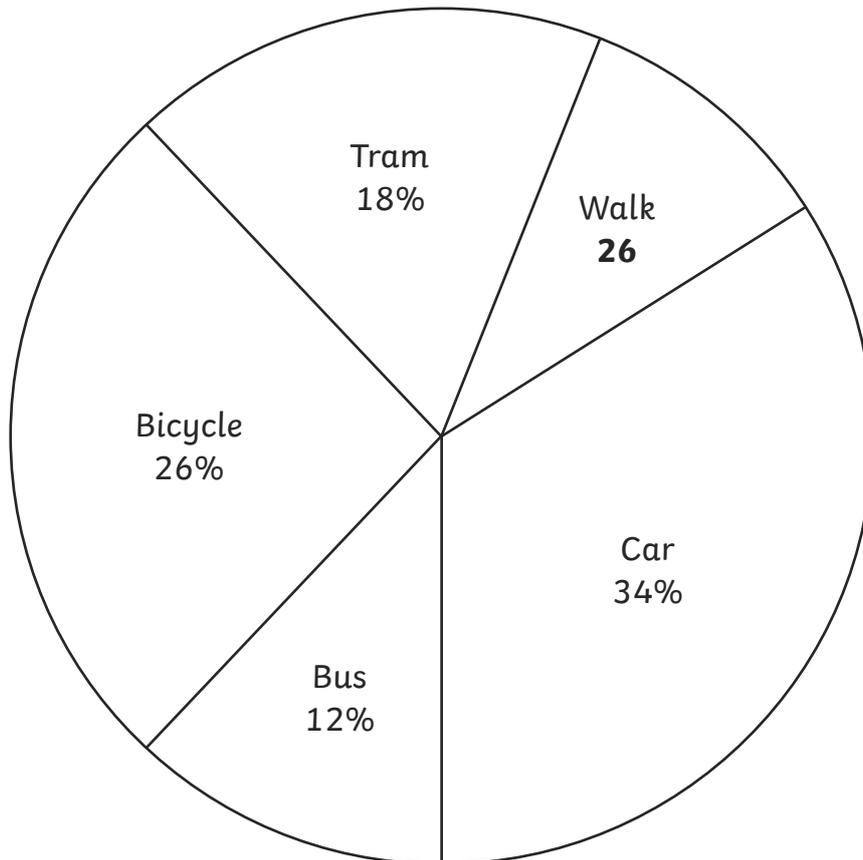


Travelling to School Pie Charts

I can interpret pie charts and use them to solve problems.



1. This pie chart shows the different ways that the children in Key Stage 2 travel to school. Use the information in the pie chart to answer these questions:



- a. What percentage of the children do not walk to school?

- b. What percentage of the children walk to school?

- c. How many children are there in total in Key Stage 2?

- d. How many children travel to school by car? Don't forget to round your answer.



e. How many children travel to school by bus? Don't forget to round your answer.

f. How many children travel to school by bicycle? Don't forget to round your answer.

g. How many children travel to school by tram? Don't forget to round your answer.

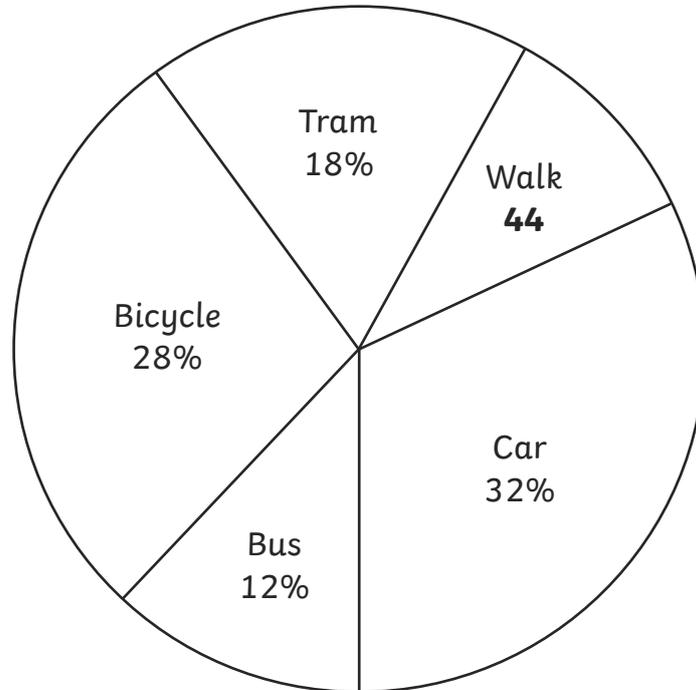


Travelling to School Pie Charts

I can interpret pie charts and use them to solve problems.



1. This pie chart shows the different ways that the children at Newtown Primary School travel to school. Use the information in the pie chart to answer these questions:



- a. What percentage of the children do not walk to school?

- b. What percentage of the children walk to school?

- c. How many children are there at Newtown Primary School?

- d. How many children travel to school by car?

- e. How many children travel to school by bus?



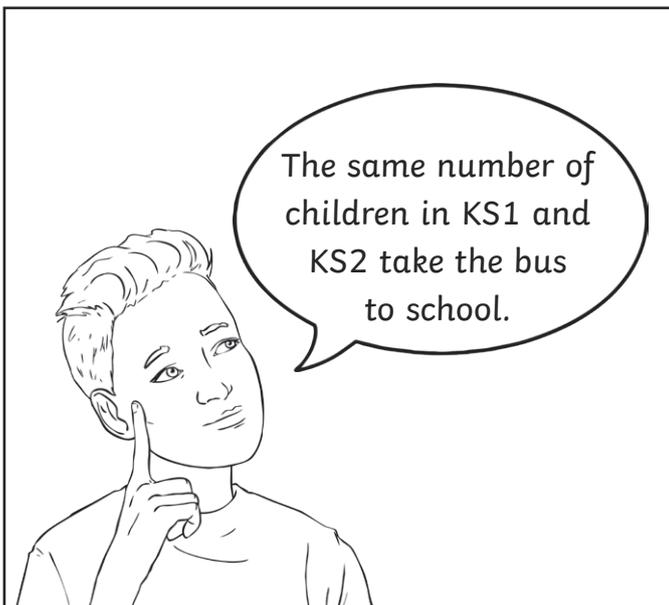
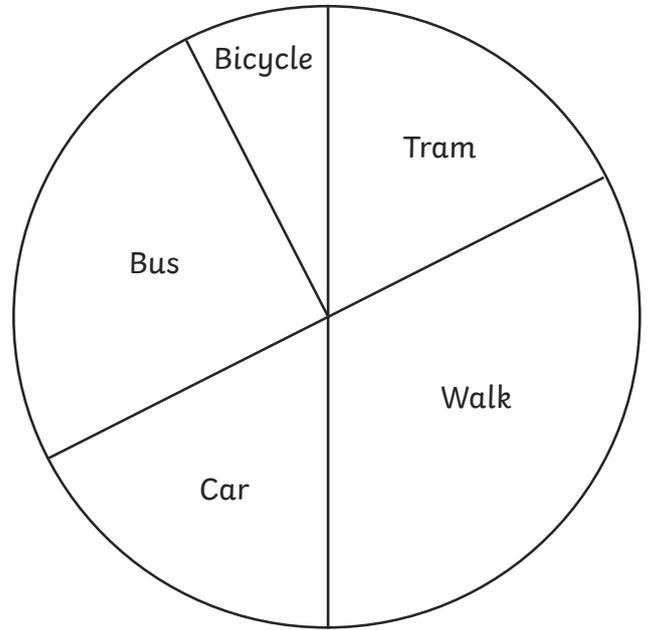
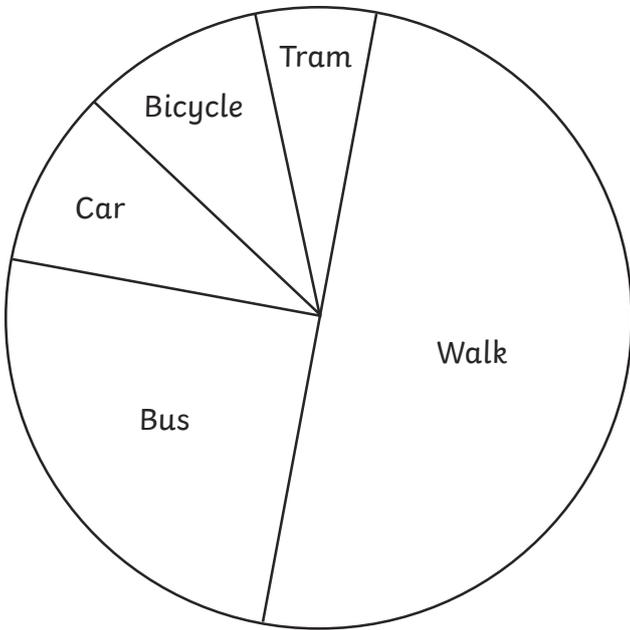
f. How many children travel to school by bicycle or tram?

g. What fraction of the children travel to school by bicycle or bus? What is the simplest fraction you can make?

2. These pie charts show the different ways that the children in KS1 and KS2 travel to school. There are 100 children in KS1 and 120 children in KS2.

How KS1 Children Travel to School

How KS2 Children Travel to School



Do you agree with Ash? Explain your reasoning.

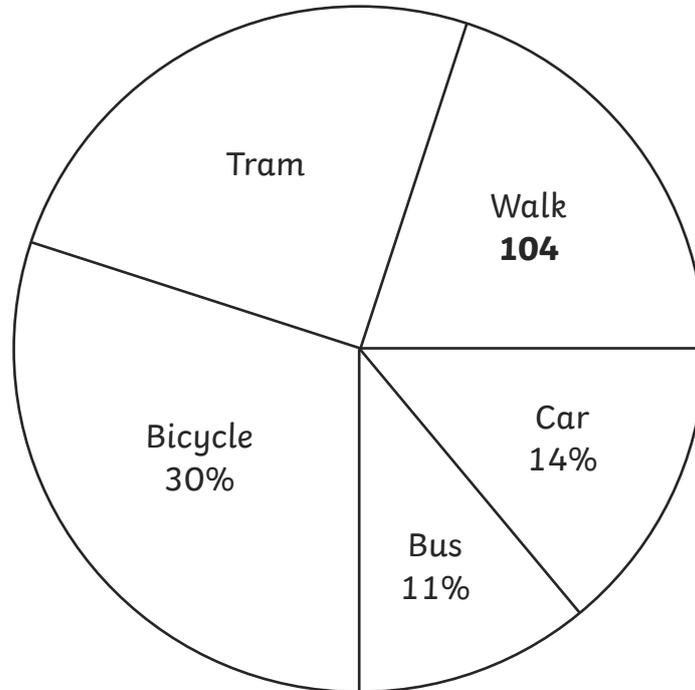


Travelling to School Pie Charts

I can interpret pie charts and use them to solve problems.



1. This pie chart shows the different ways that the children at Oldchester Primary School travel to school. Use the information in the pie chart to answer these questions:



- a. What percentage of the children travel to school by tram?

- b. What percentage of the children do not walk to school?

- c. What percentage of the children walk to school?

- d. How many children are there at Oldchester Primary School?

- e. How many children travel to school by car or bus?



f. How many children travel to school by bicycle or tram?

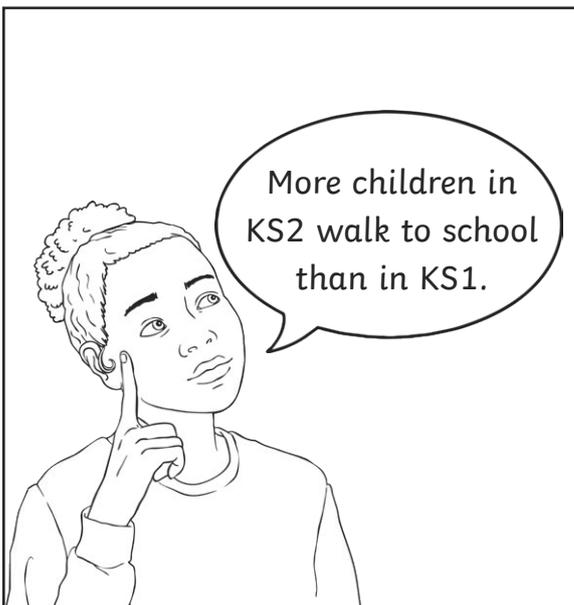
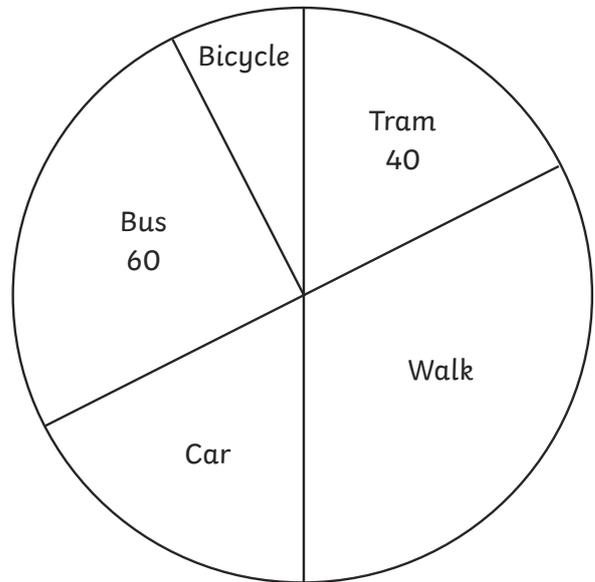
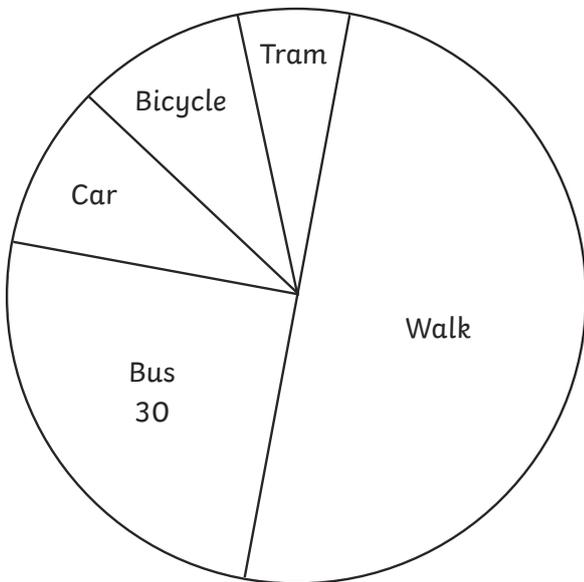
g. How many more children travel by bicycle than tram?

h. What fraction of the children do not walk to school? What is the simplest fraction you can make?

2. These pie charts show the different ways that the children in KS1 and KS2 travel to school.

How KS1 Children Travel to School

How KS2 Children Travel to School



Do you agree with Irina? Explain your reasoning.



Travelling to School Pie Charts

Answers

a. What percentage of the children do not walk to school?

$$(18\% + 34\% + 12\% + 26\%) = 90\%$$

b. What percentage of the children walk to school?

$$100\% - 90\% (18\% + 34\% + 12\% + 26\%) = 10\%$$

c. How many children are there in total in Key Stage 2?

$$10\% = 26 \text{ so } 100\% = 260$$

d. How many children travel to school by car?

$$10\% = 26 \text{ so } 1\% = 2.6$$

$$34 \times 2.6 = 88.4$$

The rounded answer equals 88, therefore, 88 children travel by car.

e. How many children travel to school by bus?

$$10\% = 26 \text{ so } 1\% = 2.6$$

$$12 \times 2.6 = 31.2$$

The rounded answer equals 31, therefore, 31 children travel by bus.

f. How many children travel to school by bicycle?

$$10\% = 26 \text{ so } 1\% = 2.6$$

$$26 \times 2.6 = 67.6$$

The rounded answer equals 68, therefore, 68 children travel by bicycle.

g. How many children travel to school by tram?

$$10\% = 26 \text{ so } 1\% = 2.6$$

$$18 \times 2.6 = 46.8$$

The rounded answer equals 47, therefore, 47 children travel by tram.



Travelling to School Pie Charts

Answers

1. This pie chart shows the different ways that the children at Newtown Primary School travel to school. Use the information in the pie chart to answer these questions:

a. What percentage of the children do not walk to school?

$$(18\% + 32\% + 12\% + 28\%) = 90\%$$

b. What percentage of the children walk to school?

$$100\% - 90\% (18\% + 32\% + 12\% + 28\%) = 10\%$$

c. How many children are there at Newtown Primary School?

$$10\% = 44 \text{ so } 100\% = 440$$

d. How many children travel to school by car?

$$10\% = 44 \text{ so } 1\% = 4.4$$

$$32 \times 4.4 = 140.8$$

The rounded answer equals 141, therefore, 141 children travel by car.

e. How many children travel to school by bus?

$$10\% = 44 \text{ so } 1\% = 4.4$$

$$12 \times 4.4 = 52.8$$

The rounded answer equals 53, therefore, 53 children travel by bus.

f. How many children travel to school by bicycle or tram?

$$10\% = 44 \text{ so } 1\% = 4.4$$

$$28\% + 18\% = 46\%$$

$$46 \times 4.4 = 202.4$$

The rounded answer equals 202, therefore, 202 children travel by bicycle or tram.

g. What fraction of the children travel to school by bicycle or bus?

$$\frac{40}{100} = \frac{4}{10} = \frac{2}{5}$$

2. *Ash is incorrect. Although one quarter of the children in KS1 and one quarter of the children in KS2 take the bus, there are more children in KS2. One quarter of 100 is 25, so 25 children in KS1 take the bus. One quarter of 120 is 30, so 30 children in KS2 take the bus.*



Travelling to School Pie Charts

Answers

1. This pie chart shows the different ways that the children at Oldchester Primary School travel to school. Use the information in the pie chart to answer these questions:

a. What percentage of the children travel to school by tram?

25%

b. What percentage of the children do not walk to school?

$(25\% + 14\% + 11\% + 30\%) = 80\%$

c. What percentage of the children walk to school?

$100\% - 80\% (25\% + 32\% + 11\% + 30\%) = 20\%$

d. How many children are there at Oldchester Primary School?

$20\% = 104$, therefore, $100\% = 520$ because $104 \times 5 = 520$.

e. How many children travel to school by car or bus?

$10\% = 52$ so $1\% = 5.2$

$14\% + 11\% = 25\%$

$25 \times 5.2 = 130$, therefore, 130 children travel by car or bus.

f. How many children travel to school by bicycle or tram?

$10\% = 52$ so $1\% = 5.2$

$30\% + 25\% = 55\%$

$55 \times 5.2 = 286$, therefore, 286 children travel by bicycle or tram.

g. How many more children travel by bicycle than tram?

For tram, 25% of $520 = 130$ and for bicycle, 30% of $520 = 156$. Therefore, 26 more children travel by bicycle than tram as $156 - 130 = 26$.

h. What fraction of the children do not walk to school?

$\frac{80}{100} = \frac{8}{10} = \frac{4}{5}$



- 2. Irina is correct. Although a larger proportion of children in KS1 walk to school, there are more children in KS2. We know this because 30 children take the bus in KS1. This is one quarter of the total. This means that 60 children walk to school in KS1. We know that one quarter of the children in KS2 take the bus, and that this is 60 children. Therefore, half of this pie chart must be 120. We can use the fact that 40 children take the tram and that this sector of the pie chart is the same size as the car sector. If the car sector represents 40 children, and 'car' and 'walk' together is one half, we can subtract 40 from 120 to work out that 80 children walk to school. This proves that Irina is right, as 80 children in KS2 walk to school while only 60 children walk to school in KS1.*