

Week 6 – Lesson 4

If ...

Could I have added 2 even numbers? Explain why or why not?

48

Could I have multiplied a whole number by 2? Explain why or why not?

Is my answer ... Then what was my question?



Learning Question:

How can I answer questions about data presented in diagrams?

Success Criteria:

- Interpret tables.
- Interpret Venn diagrams.
- Interpret Carroll diagrams.

Vocabulary

- Data
- Frequency
- Pictogram
- Bar Chart
- Discrete Data
- Axis
- Tally
- Key
- Title

Bar Charts

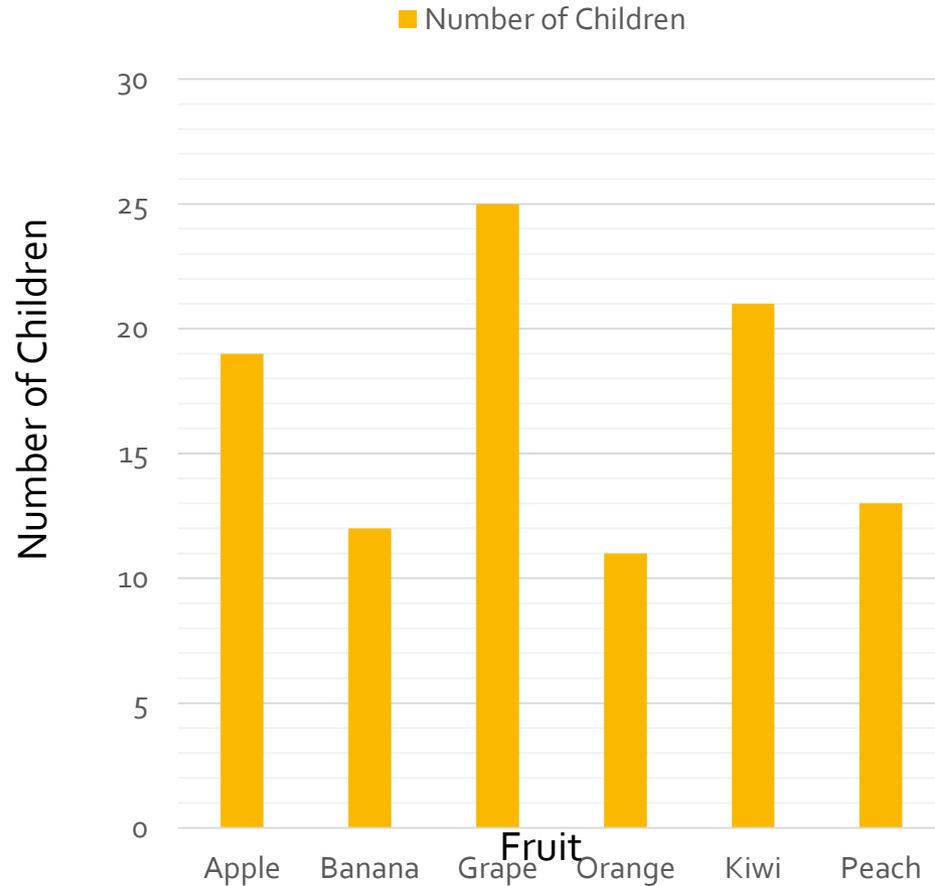
Which fruit is the most popular?

Which fruit is the least popular?

How many more people like apples than bananas?

How many children said peaches are their favourite fruit?

A Bar Chart to Show Class 4's Favourite Fruit



How did you do?

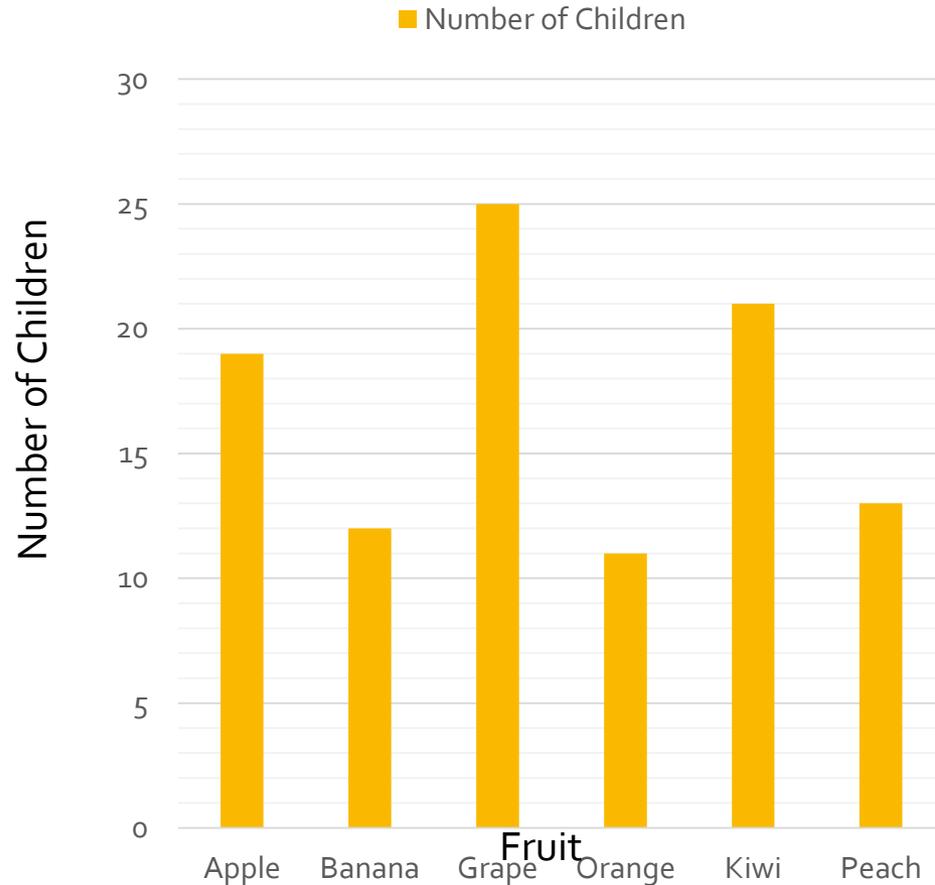
Which fruit is the most popular?
Grapes

Which fruit is the least popular?
Oranges

How many more people like apples than bananas?
7 children

How many children said peaches are their favourite fruit?
13

A Bar Chart to Show Class 4's Favourite Fruit



Venn Diagrams

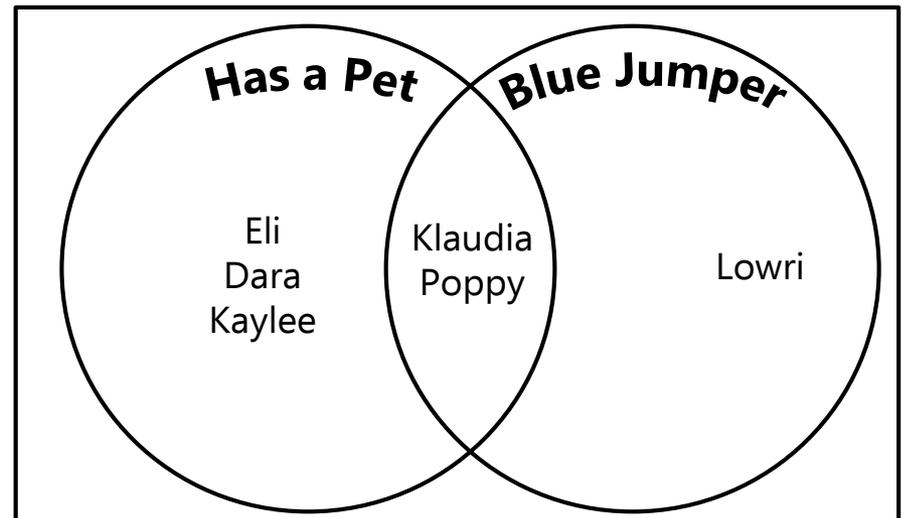
In their computing lesson, the children in Class 4 have created a database about themselves. In order to easily answer questions about the data, the children present the data as a Venn diagram.

Name	Any Pets?	Colour of Jumper	Colour of Hair
Eli	yes	red	black
Dara	yes	red	brown
Kaylee	yes	red	blonde
Poppy	yes	blue	blonde
Klaudia	yes	blue	auburn
Lowri	no	blue	brown

In a Venn diagram, each circle represents an individual set of data.

By overlapping the sets of data, an intersection is created where data that is in both sets can be shown.

In this Venn diagram, we can easily see that only Klaudia and Poppy have a pet **and** are wearing a blue jumper.



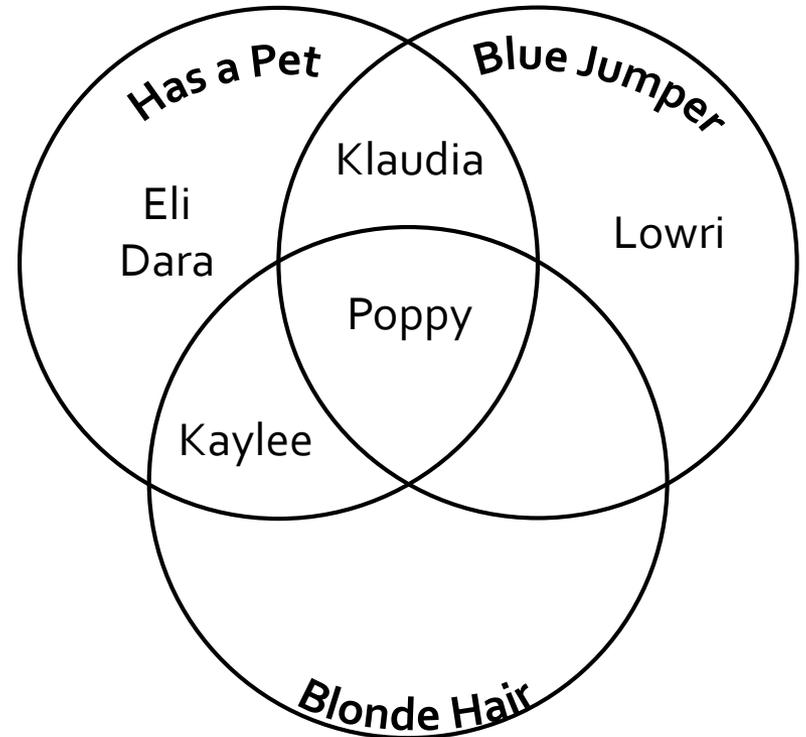
Venn Diagrams

Name	Any Pets?	Colour of Jumper	Colour of Hair
Eli	yes	red	black
Dara	yes	red	brown
Kaylee	yes	red	blonde
Poppy	yes	blue	blonde
Klaudia	yes	blue	auburn
Lowri	no	blue	brown

Class 4's database has three categories of data,
which the children show using three overlapping circles.

There are now three intersections where two circles overlap,
and a central intersection where all three circles overlap.

We can easily see that only Poppy has a pet **and** is wearing a blue jumper **and** has blonde hair!



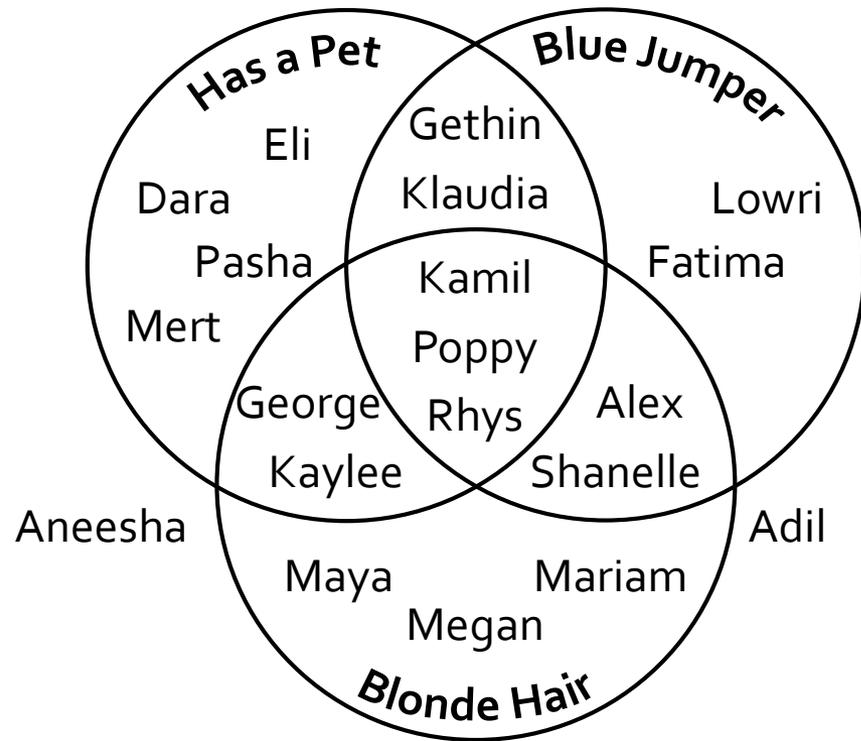
Use this Venn diagram to answer these questions about the children.

What do we know about Aneesha and Adil?

Does Shanelle have a pet or wear a blue jumper?

Does Gethin have blonde hair and a pet?

Does Kamil have a blue jumper on?



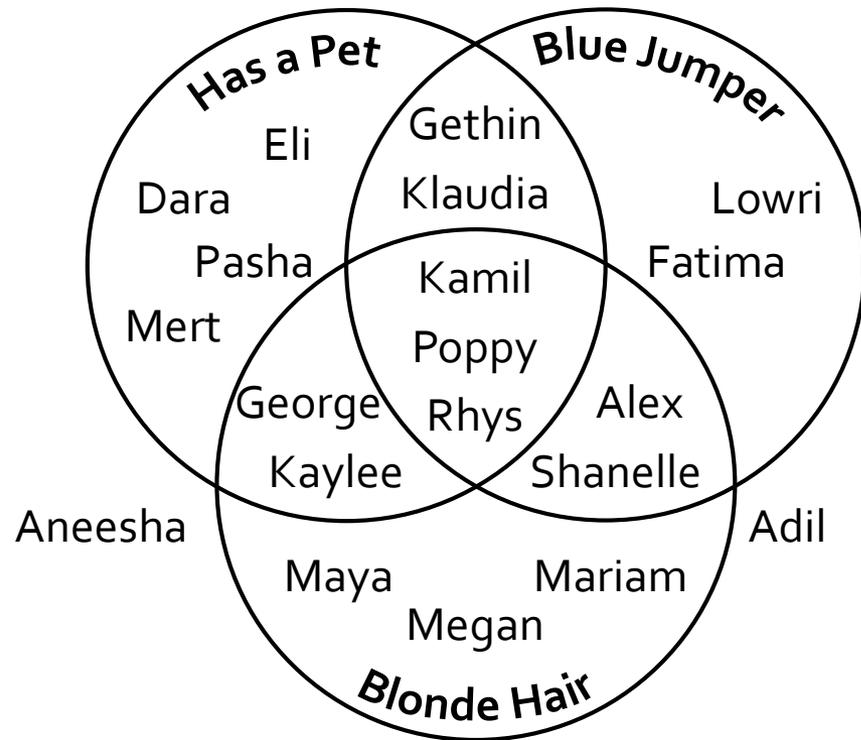
How did you do?

What do we know about Aneesha and Adil?
They do not have a pet, a blue jumper or blonde hair.

Does Shanelle have a pet or wear a blue jumper?
Wears a blue jumper.

Does Gethin have blonde hair and a pet?
No. He has a blue jumper and a pet.

Does Kamil have a blue jumper on?
Yes.

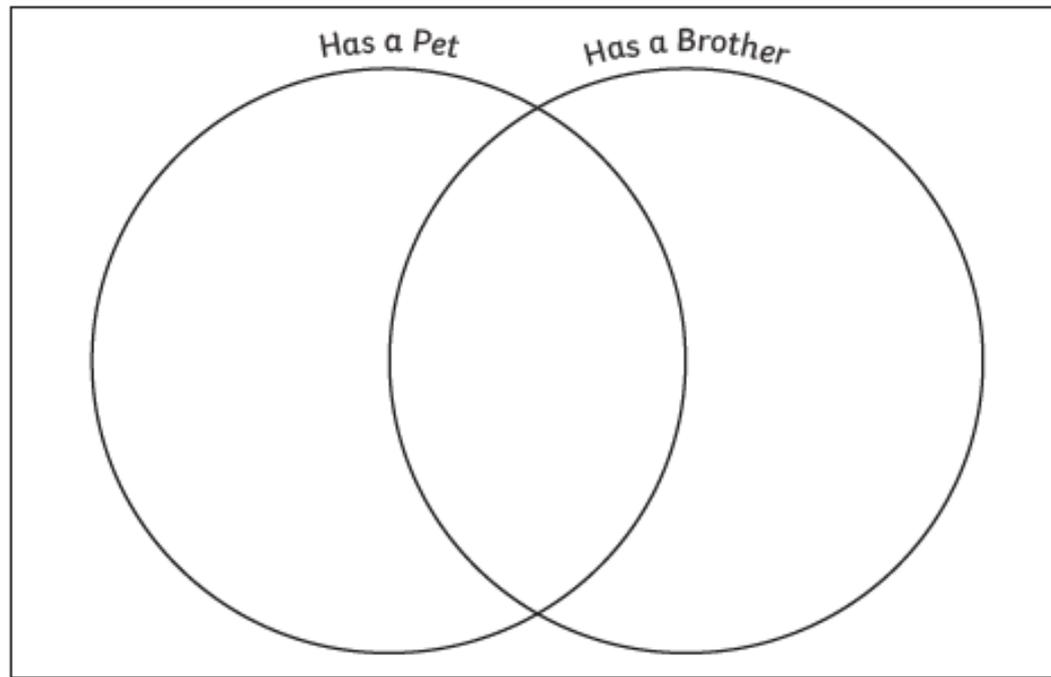


Task: Use this data to answer the venn diagram questions on the next slides.

All About Us Statistics: Class 4 Database

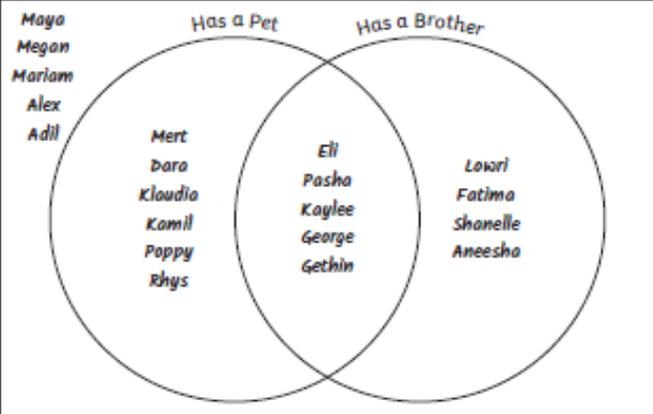
Name	Pet	Jumper Colour	Hair Colour	Siblings	Likes Pizza	Eye Colour	Plays Football	Gender	Transport to School
Mert	dog	red	brown	none	yes	brown	no	boy	bus
Eli	fish	red	black	big brother	yes	brown	no	boy	walk
Pasha	cat	red	brown	big brother	no	blue	no	boy	car
Dara	cat	red	brown	little sister	no	green	yes	boy	bus
Kaylee	cat	red	blonde	big brother	yes	green	yes	girl	walk
George	cat	red	blonde	big brother	no	blue	yes	boy	car
Maya	none	red	blonde	little sister	yes	blue	no	girl	car
Megan	none	red	blonde	little sister	no	grey	yes	girl	bus
Mariam	none	red	blonde	little sister	no	green	no	girl	walk
Gethin	cat	blue	brown	big brother	no	blue	yes	boy	walk
Klaudia	cat	blue	auburn	little sister	no	brown	no	girl	walk
Kamil	cat	blue	blonde	none	no	brown	no	boy	walk
Poppy	cat	blue	blonde	none	no	blue	no	girl	car
Rhys	cat	blue	blonde	none	no	grey	no	boy	walk
Lowri	none	blue	brown	little sister and big brother	no	blue	no	girl	walk
Fatima	none	blue	brown	little sister and big brother	yes	blue	yes	girl	bus
Alex	none	blue	blonde	none	yes	green	yes	boy	car
Shanelle	none	blue	blonde	little sister and big brother	yes	brown	yes	girl	car
Adil	none	red	brown	none	no	blue	no	boy	bus
Aneesha	none	red	brown	little sister and big brother	yes	blue	yes	girl	walk

Hard



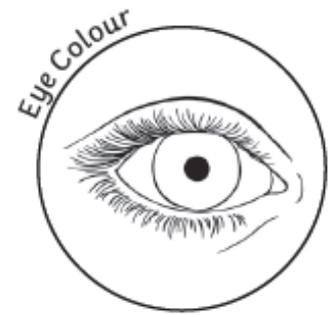
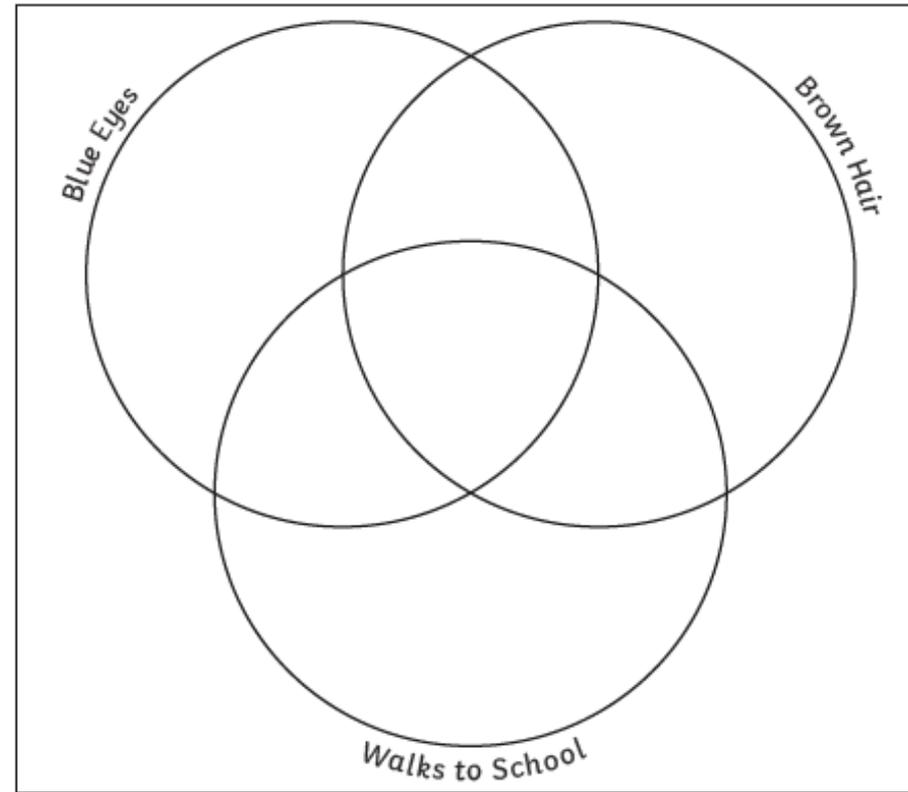
Answer these questions about the Venn diagram:

- 1) Does Pasha have a brother? Yes/No
- 2) Does Aneesha have a brother and a pet? Yes/No
- 3) Does Alex have either a brother or a pet? Yes/No
- 4) How many children have a pet? _____
- 5) How many children have a brother? _____
- 6) How many children have a brother and a pet? _____
- 7) How many children do not have either a brother or a pet? _____
- 8) Give the name of any child who has a brother. _____
- 9) Give the name of any child who doesn't have a pet. _____
- 10) What do we know about Gethin from the Venn diagram? _____

Question	Answer
	Using the information from the Class 4 database, complete the Venn diagram by putting the children's names in the correct area.
	
1. Does Pasha have a brother?	7. How many children do not have either a brother or a pet?
<i>yes</i>	<i>5</i>
2. Does Aneesha have a brother and a pet?	8. Give the name of any child who has a brother.
<i>no</i>	<i>Any name within the circle on the right</i>
3. Does Alex have either a brother or a pet?	9. Give the name of any child who doesn't have a pet.
<i>no</i>	<i>Any name outside of the diagram or in the circle on the right only</i>
4. How many children have a pet?	10. What do we know about Gethin from the Venn diagram?
<i>11</i>	<i>He has a pet and a brother.</i>
5. How many children have a brother?	
<i>9</i>	
6. How many children have a brother and a pet?	
<i>5</i>	

Harder

Using the information from the Class 4 database, complete the Venn diagram by putting the children's names in the correct area.



Answer these questions about the Venn diagram:

- 1) Does George have brown hair? Yes/No
- 2) Does Eli have brown hair and walk to school? Yes/No
- 3) Does Kamil have either blue eyes or brown hair? Yes/No
- 4) How many children either walk to school or have blue eyes? _____
- 5) How many children have blue eyes and brown hair? _____
- 6) Give the name of any child who walks to school. _____
- 7) Give the name of any child who doesn't have blue eyes. _____
- 8) What do we know about Dara from the Venn diagram? _____

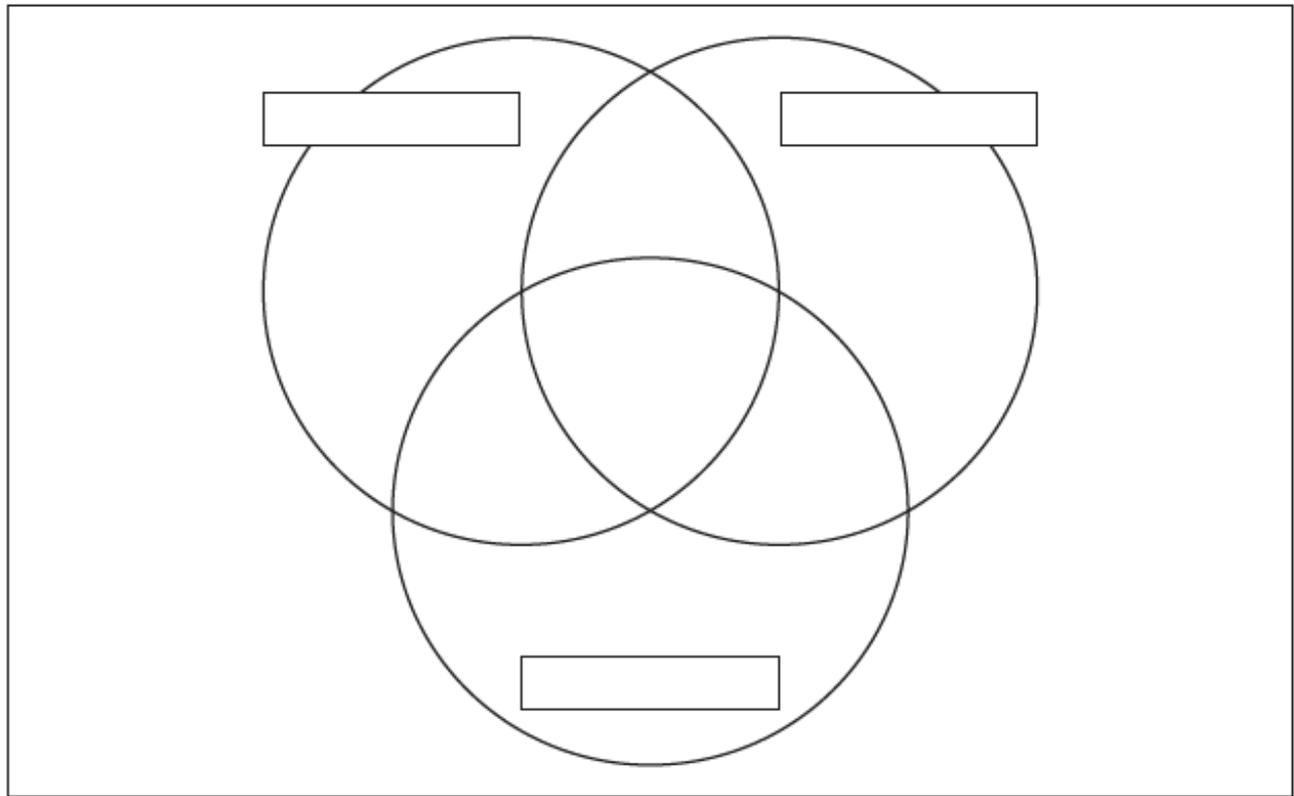
Question	Answer
	Using the information from the Class 4 database, complete the Venn diagram by putting the children's names in the correct area.

1. Does George have brown hair?	
	<i>no</i>
2. Does Eli have brown hair and walk to school?	
	<i>no</i>
3. Does Kamil have either blue eyes or brown hair?	
	<i>no</i>
4. How many children either walk to school or have blue eyes?	
	<i>15</i>
5. How many children have blue eyes and brown hair?	
	<i>6</i>

6. Give the name of any child who walks to school.	
	<i>Any name within the bottom circle</i>
7. Give the name of any child who doesn't have blue eyes.	
	<i>Any name outside of the diagram or not in any part of the circle on the left.</i>
8. What do we know about Dara from the Venn diagram?	
	<i>He has brown hair. He doesn't have blue eyes. He doesn't walk to school.</i>

Hardest

Using the information from the Class 4 database, select a data set for each circle and then complete your Venn diagram by putting the children's names in the correct area.



Answer these questions about the Venn diagram:

- 1) Does _____? Yes/No
- 2) Does _____? Yes/No
- 3) Does _____? Yes/No
- 4) How many children _____? _____
- 5) How many children _____? _____
- 6) Give the name of any child who _____.
- 7) Give the name of any child who doesn't _____.
- 8) What do we know about _____ from the Venn diagram?