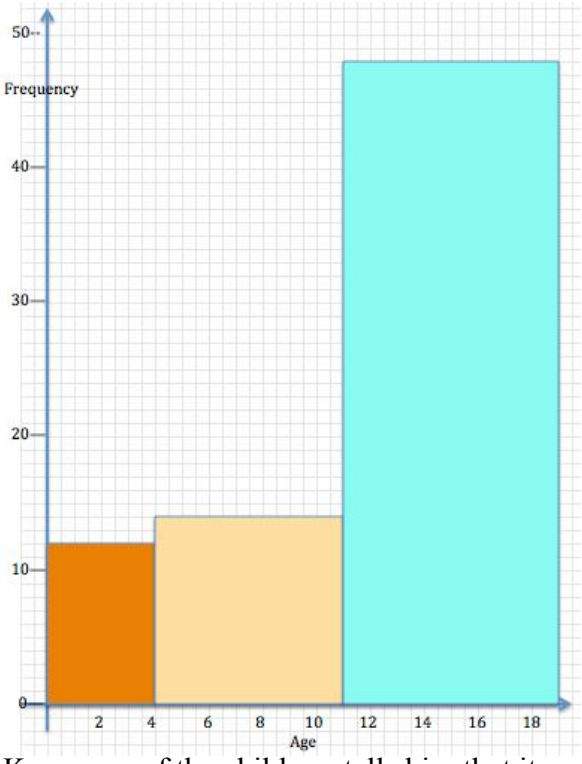
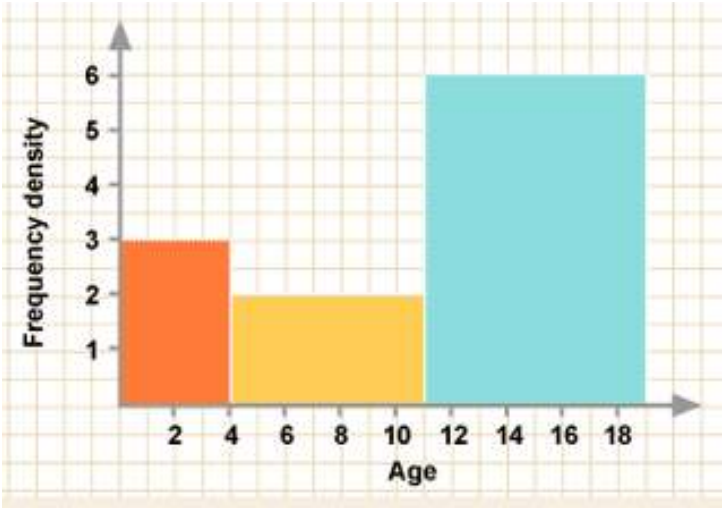
BEST REPRESENTATION





The ages of children arriving at a zoo in 1 hour are noted by the ticket salesman. There are 12 children between 0 and 3 years old, 14 children between 4 and 10 years old and 48 between 11 and 18 years old.

He draws a bar graph or frequency diagram like the one on the left to represent this data.

Kaya, one of the children, tells him that it would be better to represent the data in a histogram and she draws the diagram on the right.

Compare the two diagrams. What is the same and what is different about these two diagrams?

Explain how the frequencies are represented in each of the diagrams. Which is the best representation?

Do you agree with Kaya or not? Give reasons.

Help

You will probably find it helpful to work with a partner so that you can help each other to figure out what the question means and how to give your answers. Keep re-reading it trying to make sense of it and answer the questions. Have a good try, and don't be give up without a struggle because struggling with a problem is a good way to learn. But if you and your partner are both completely stuck, tell your teacher who may arrange for you to work with another learner or learners who will share their ideas with you.

Extension

The diagram on the right is called a histogram.

If you finish before other people in the class you and your partner could plan how to collect the data so that the class can draw a histogram for the ages of the brothers and sisters of children in the class. First work out the best way to collect the data and make a chart on which you will keep a record. Ask the teacher if you can collect this data from the other members of the class. If time you might plan how to draw and label the axes.