

Solve problems involving ratios of the form 1:n (or n:1)

1 A cake tray holds 6 muffins.



- a) For every 1 tray, there are muffins.
- b) The ratio of trays to muffins is :
- c) For every muffins, there is tray.
- d) The ratio of muffins to trays is :
- e) How many muffins would 2 trays hold?
- f) How many muffins would 3 trays hold?
- g) How many trays would be needed for 30 muffins?

2 A cake mixture has 1 part flour to 1 part sugar.

- a) If 200 g of flour is used, how much sugar is needed?
- b) If 100 g of sugar is used, how much flour is needed?
- c) What do you notice about your answers?

3 Juice is made using cordial and water in a ratio of 1:5

- a) Label the bar model.

_____	<table style="border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> </tr> </table>					

Explain your answer to a partner.

- b) Use the bar model to work out how much juice can be made using 20 ml of cordial.

- c) Use a bar model to work out how much juice can be made using 20 ml of water.

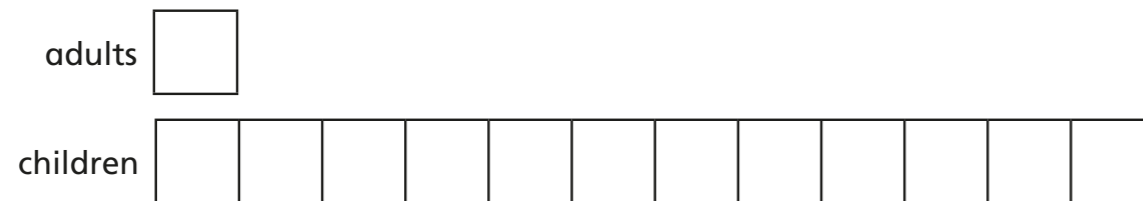
- d) What is the same and what is different about parts b) and c)?

4 The ratio of adults to children in a school is 1 : 12
There are 156 children in the school.

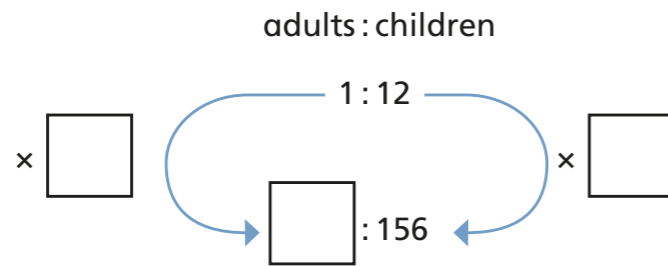
How many adults are there?

a) Use each method to show how many adults there are.

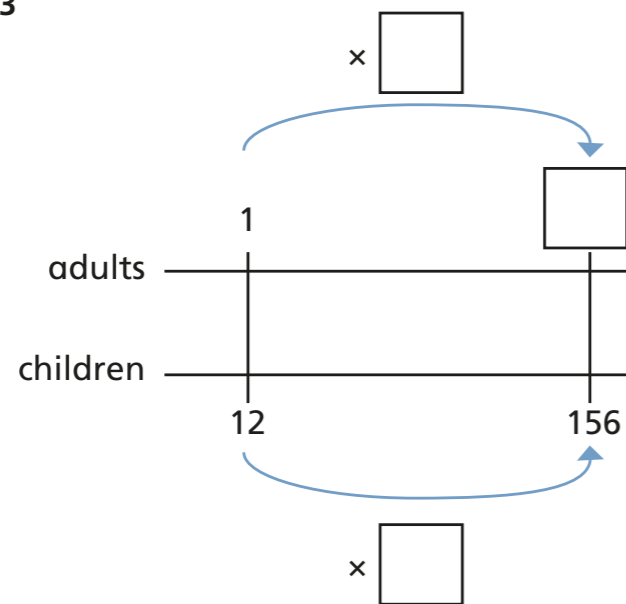
Method 1



Method 2



Method 3



There are adults in the school.

b) Which method do you prefer to use? Why? Discuss it with a partner.



5 Use your preferred method to answer the question.
The ratio of children to adults in a supermarket is 1 : 5
There are 15 children in the supermarket.
How many adults are in the supermarket?

6 For every 3 monkeys in a zoo, there is 1 tiger.
a) If there are 150 tigers, how many monkeys are there?

b) If there are 150 monkeys, how many tigers are there?

c) If there are 300 monkeys, how many tigers are there?

7 A model of a house is made using a scale of 1 : 32
a) Which part represents the model of the house?
How do you know?

b) If the house is 8 m tall, how tall will the model of the house be in centimetres?

