

## Arithmetic

1.  $\frac{9}{10} \times \frac{2}{5}$

2.  $7 - 1.36$

3.  $0.2 \times 71$

4. 3 and  $\frac{1}{3} \times 5$

## Practice: Calculating Ratio

5. Recap: Explain how you would represent this ratio on a bar model.



1:3

6. Mr Jones plants some flowers. For every 3 roses, he plants 2 daisies. He plants 15 roses. How many daisies did he plant? How many flowers did he plant altogether?



7. Bhupinder mixes 5 parts blue paint with 2 parts white paint. He starts with 10 parts of blue paint. How much white paint will he need? How many parts is that altogether?

8. In a packet of sweets, there are 3 lemon for every 4 lime. There are 12 lime sweets. How many lemon sweets are there? How many lemon and lime sweets are there altogether?

9. In a classroom, there are 6 boys for every 7 girls. There are 26 children in the class. How many boys are there? How many girls?

10. Explain how you found the answers in question 9.



11. In a bag, there are 2 red marbles for every 5 blue marbles. There are 21 marbles altogether. How many red marbles are there? How many blue?

12. In a pencil case, the ratio of red to blue to yellow pencils is 2:3:4. There are 18 pencils altogether. How many of each colour are there?

13. Lola says that the answer to question 12 is red = 2, blue = 3 and yellow = 4. Is she correct? Explain.



## Challenge

14. One salad is made from lettuce leaves, cucumber slices and tomatoes in a ratio of 6:4:5. Use this ratio to solve these questions.

- If there are 100 tomatoes, how many lettuce leaves and cucumber slices are needed?
- If there are 92 cucumber slices, how many lettuce leaves and tomatoes are needed?
- There are a total of 900 items (lettuce leaves + cucumber slices + tomatoes) altogether. How many of each item is there?



You might want to talk to an adult



Spot the mistake

## Answers

Q no.	Question	Answer
1	$\frac{9}{10} \times \frac{2}{5}$	$\frac{18}{50}$ or $\frac{9}{25}$
2	$7 - 1.36$	x
3	$0.2 \times 71$	x
4	$3 \text{ and } \frac{1}{3} \times 5$	$\frac{50}{3}$ or 16 and $\frac{2}{3}$
5	Explain how you would represent this ratio on a bar model.	Pupils should demonstrate that the bar model needs to have four parts in total. This could be one bar with three parts the same and one part different or it could be two bars, one on top of the other, one with one part and the other with three parts. The parts in the bars should all be equal sizes.
6	How many daisies did he plant? How many flowers did he plant altogether?	10, 25
7	How much white paint will he need? How many parts is that altogether?	4, 14
8	How many lemon sweets are there? How many lemon and lime sweets are there altogether?	9, 21
9	How many boys are there? How many girls?	12, 14
10	Explain how you found the answers in question 9.	Answers will vary depending on the method the pupil has used. This question is designed to help the pupils develop their metacognition (thinking about thinking). This should also highlight if a pupil is using an inefficient method.
11	How many red marbles are there? How many blue?	6, 15
12	How many of each colour are there?	Red – 4, blue – 6, yellow – 8
13	Is she correct? Explain.	Lola is incorrect as she has not used the fact there are 18 pencils. This indicates that Lola does not understand that, like fractions, ratios can be simplified.
14	One salad is made from lettuce leaves, cucumber slices and tomatoes in a ratio of 6:4:5. Use this ratio to solve these questions.	a. 120 lettuce leaves, 80 cucumber slices. b. 138 lettuce leaves, 115 tomatoes. c. 360 lettuce leaves, 240 cucumber slices, 300 tomatoes