Arithmetic

1. $\frac{2}{3} \times \frac{3}{7}$

2. 5 – 0.16

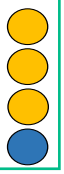
3. 0.5 x 32

4. $2\frac{1}{2} \times 6$

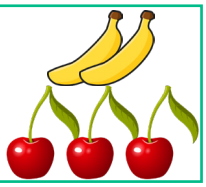
Practice: Introducing Ratio

5. Recap: Explain what ratio shows.

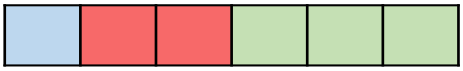
6. Complete the sentences. a. For every 1 blue counter, there are ? yellow counters.
b. The ratio of blue to yellow counters is ?:?.
c. There are ? counters in total.



7. Complete the sentences.
a. For every 2 bananas there are ? cherries. What fraction is: b. bananas, c. cherries?



8. This bar model shows the ratio 1:2:3.
What is fraction: a. blue, b. red, c. green?



9. In 5 counters, $\frac{2}{5}$ are blue. The rest are red.
What is the ratio of red to blue counters?

10. Explain how this ratio and fraction are linked.
$\frac{1}{5}$ and 1:4

11. In a multipack of crisps, $\frac{3}{10}$ are plain, $\frac{4}{10}$ are cheese and onion and the rest are prawn cocktail. What is the ratio of plain to cheese and onion to prawn cocktail crisps?

12. In a pack of 12 pens, there are 3 colours. $\frac{8}{12}$ are black. The rest are split evenly amongst blue and red colours. What is the ratio of black to blue to red pens?

13. Toby says the diagram shows $\frac{2}{3}$ of the counters are green. Is this correct? Explain.

Challenge

14. A shop has a bargain box containing purple and red tops. $\frac{5}{9}$ of the tops are purple.
Write as many ratio or fraction facts as you can about this statement.

You might want to talk to an adult

Spot the mistake

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Answers

Q no.	Question	Answer
1	$\frac{2}{3} \times \frac{3}{7}$	$\frac{6}{21}$
2	5 – 0.16	4.84
3	0.5 x 32	16
4	$2\frac{2}{5} \times 6$	15
5	Explain what ratio shows.	Ratio shows the relationship between two values. Ratio can also describe how one value is related to multiple values.
6	Complete the sentences.	a. 3, b. 1:3, c. 4
7	Complete the sentences.	a. 3, b. $\frac{2}{5}$, c. $\frac{3}{5}$
8	What is fraction: a. blue, b. red, c. green?	a. $\frac{1}{6}$, b. $\frac{2}{6}$, c. $\frac{3}{6}$
9	What is the ratio of red to blue counters?	3:2
10	Explain how this ratio and fraction are linked.	Ratio compares the size of quantities but fractions (or proportions) compare the relationship between two sets of quantities. The fraction shows 1 in every five parts whereas the ratio shows 1 part for every four. The total number of items being compared are the same (5) but the way the parts are described are different.
11	What is the ratio of plain to cheese and onion to prawn cocktail crisps?	3:4:3
12	What is the ratio of black to blue to red pens?	8:2:2 or 4:1:1
13	Is this correct? Explain.	Toby is incorrect. This shows he does not fully understand the connection between fractions and ratio. The correct fraction is $\frac{2}{5}$ as there are five counters in total and 2 are green.
14	A shop has a bargain box containing purple and red tops. $\frac{5}{9}$ of the tops are purple. Write as many ratio or fraction facts as you can about this statement.	For every 5 purple tops, there are 4 red tops. There are $\frac{4}{9}$ red tops. For every 4 red tops there are 5 purple tops. Pupils may identify that $\frac{5}{9}$ could be simplified. If they identify this, they may create alternative sentences such as 'For every 8 red tops, there are 10 purple tops.' Accept answers that reflect the original fraction of $\frac{5}{9}$.

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