GCSE Maths: Ratios and fractions (Foundation): answers

GCSE Maths - Ratio and Proportion - Foundation - Lesson 15.5

Answers. Final answers to the worksheet questions. Full step-by-step solutions for every question are free at **websink.site/gcse/maths/ch15-ratio-proportion/foundation/ratios-and-fractions/**

Exercise 15E Ratios and fractions Non-calculator

1 Write the first share as a fraction of the total.

(a) Ratio 1 : 3

Answer: $\frac{1}{4}$

(b) Ratio 2 : 3

Answer: $\frac{2}{5}$

(c) Ratio 3 : 5

Answer: $\frac{3}{8}$

(d) Ratio 4 : 5

Answer: $\frac{4}{9}$

(e) Ratio 5 : 7

Answer: $\frac{5}{12}$

(f) Ratio 7 : 3

Answer: $\frac{7}{10}$

2 The ratio of red counters to blue counters is 2 : 3. What fraction of the counters are blue?

Answer: $\frac{3}{5}$

3 Three friends share a prize in the ratio 1 : 2 : 3. What fraction of the prize does each friend receive?

Answer: first friend $\frac{1}{6}$, second friend $\frac{1}{3}$ and third friend $\frac{1}{2}$

4 Write each as a ratio in its simplest form.

(a) $\frac{1}{4}$ of the members are juniors and the rest are seniors. Juniors : seniors

Answer: 1 : 3

(b) $\frac{3}{5}$ of the cars are red and the rest are blue. Red : blue

Answer: 3 : 2

(c) $\frac{2}{9}$ of the sweets are mints and the rest are toffees. Mints : toffees

Answer: 2 : 7

(d) $\frac{5}{8}$ of the pupils walk and the rest cycle. Walk : cycle

Answer: 5 : 3

5 **Write each as a ratio in its simplest form.**

(a) $\frac{1}{2}$ of the beads are red, $\frac{1}{3}$ are blue and the rest are green. Red : blue : green

Answer: 3 : 2 : 1

(b) $\frac{1}{4}$ of the snacks are apples, $\frac{1}{6}$ are bananas and the rest are oranges. Apples : bananas : oranges

Answer: 3 : 2 : 7

6 **Write A : B as a ratio in its simplest form.**

(a) A is $\frac{3}{4}$ of B

Answer: 3 : 4

(b) A is $\frac{5}{6}$ of B

Answer: 5 : 6

(c) A is $\frac{3}{10}$ of B

Answer: 3 : 10

(d) A is $\frac{4}{7}$ of B

Answer: 4 : 7

7 **In a class the ratio of boys to girls is 3 : 5. The class has 32 students. Use fractions to work out how many boys there are.**

Answer: 12

8 **$\frac{2}{5}$ of the students in a club walk to school and the rest cycle. (a) Write the ratio walk : cycle. (b) There are 35 students. How many cycle?**

(a) Ratio walk : cycle

Answer: 2 : 3

(b) Number who cycle

Answer: 21

9 **Sam spends $\frac{2}{5}$ of his money on food and $\frac{1}{4}$ on travel. He saves the rest. Write the ratio food : travel : saved.**

Answer: 8 : 5 : 7

10 **$\frac{3}{7}$ of the sweets in a box are red and the rest are blue. There are 12 more blue sweets than red sweets. How many sweets are there altogether?**

Answer: 84

11 Aisha gets $\frac{2}{5}$ of a sum of money, Ben gets $\frac{3}{10}$ and Cara gets the rest. Write the ratio Aisha : Ben : Cara in its simplest form.

Answer: 4 : 3 : 3

12 At a show the ratio of adults to children is 2 : 5. There are 350 people altogether. How many adults and how many children are there?

Answer: Adults 100, children 250

13 Zoe says: "If the ratio of x to y is 3 : 7, then x is $\frac{3}{7}$ of y and also $\frac{3}{10}$ of the total." Is Zoe right? Explain.

Answer: Yes

14 The ratio of boys to girls in a choir is 1 : 2. Dev says: "So the boys are $\frac{1}{2}$ of the choir." Explain his mistake. What fraction of the choir are boys?

Answer: $\frac{1}{3}$

15 $\frac{1}{3}$ of the counters in a bag are red. The rest are blue or green in the ratio 3 : 5. Work out the ratio red : blue : green.

Answer: 4 : 3 : 5

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