

GCSE Maths: Ratios and fractions (Higher): worksheet

GCSE Maths - Ratio and Proportion - Higher - Lesson 15.5

Name: _____

Date: _____

Score: _____

16 questions. Write your answers in the spaces. Answers and step-by-step help are free at websink.site/gcse/maths/ch15-ratio-proportion/higher/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:

(b) Ratio 2 : 3

Answer:

(c) Ratio 3 : 5

Answer:

(d) Ratio 4 : 5

Answer:

(e) Ratio 5 : 7

Answer:

(f) Ratio 7 : 3

Answer:

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

Answer:

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

Answer:

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:

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

Answer:

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

Answer:

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

Answer:

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:

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

Answer:

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

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

Answer:

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

Answer:

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

Answer:

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

Answer:

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:

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:

(b) Number who cycle

Answer:

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:

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:

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:

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:

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:

- 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:

- 15** In a school, $\frac{3}{5}$ of the pupils are girls. $\frac{1}{4}$ of the girls and $\frac{1}{3}$ of the boys play football. Work out the ratio of girls playing football to boys playing football in its simplest form.

Answer:

- 16** $\frac{1}{3}$ 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:
