

GCSE Maths: One quantity as a fraction of another (Foundation): answers

GCSE Maths - Ratio and Proportion - Foundation - Lesson 15.1

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/one-quantity-as-a-fraction-of-another/

Exercise 15A One quantity as a fraction of another Non-calculator

1 Write each as a fraction in its simplest form.

(a) 7 as a fraction of 10

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

(b) 8 as a fraction of 20

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

(c) 12 as a fraction of 30

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

(d) 9 as a fraction of 36

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

(e) 14 as a fraction of 35

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

(f) 16 as a fraction of 64

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

2 A box holds 10 pens. 4 of the pens are blue. What fraction of the pens are blue? Give your answer in its simplest form.

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

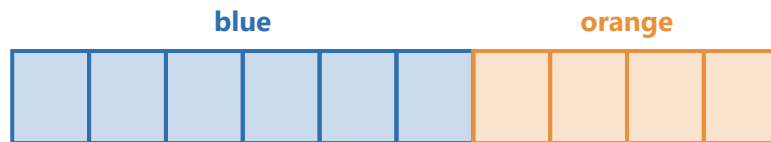
3 A bag contains 24 sweets. 9 of the sweets are red. What fraction of the sweets are red?

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

4 Mia scored 36 marks out of 45 in a test. What fraction of the marks did she score? Give your answer in its simplest form.

Answer: $\frac{4}{5}$

5 The bar is cut into equal blocks. (a) What fraction of the bar is blue? (b) What fraction of the bar is orange? Simplify where you can.



- (a) Blue as a fraction of the whole bar

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

- (b) Orange as a fraction of the whole bar

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

6 Write the first quantity as a fraction of the second. Change to the same unit first.

- (a) 20 cm of 1 m

Answer: $\frac{1}{5}$

- (b) 300 g of 2 kg

Answer: $\frac{3}{20}$

- (c) 45 minutes of 3 hours

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

- (d) 40p of £2

Answer: $\frac{1}{5}$

- (e) 250 m of 2 km

Answer: $\frac{1}{8}$

- (f) 500 ml of 3 litres

Answer: $\frac{1}{6}$

7 These fractions are bigger than 1. Write each as an improper fraction in its simplest form.

- (a) 9 as a fraction of 6

Answer: $\frac{3}{2}$ ($= 1\frac{1}{2}$)

- (b) 15 as a fraction of 10

Answer: $\frac{3}{2}$ ($= 1\frac{1}{2}$)

- (c) 7 as a fraction of 4

Answer: $\frac{7}{4}$ ($= 1\frac{3}{4}$)

- (d) 90 minutes as a fraction of 1 hour

Answer: $\frac{3}{2}$ ($= 1\frac{1}{2}$)

- (e) £5 as a fraction of 80p

Answer: $\frac{25}{4}$ ($= 6\frac{1}{4}$)

- 8 Write the first quantity as a fraction of the second. These involve decimals.

- (a) 0.6 kg of 2.4 kg

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

- (b) 0.9 m of 1.5 m

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

- (c) £3.50 of £5.60

Answer: $\frac{5}{8}$

- 9 A football team plays 38 matches. It wins 14, draws 9 and loses the rest. Write as a fraction of the matches played: (a) the matches won, (b) the matches drawn, (c) the matches lost.

- (a) Matches won

Answer: $\frac{7}{19}$

- (b) Matches drawn

Answer: $\frac{9}{38}$

- (c) Matches lost

Answer: $\frac{15}{38}$

- 10 Tariq is reading a book with 270 pages. He has read 45 pages. What fraction of the book has he **not** yet read? Give your answer in its simplest form.

Answer: $\frac{5}{6}$

- 11 In a race of 2 km, Kofi has run 750 m. What fraction of the race is left to run? Give your answer in its simplest form.

Answer: $\frac{5}{8}$

- 12 In a class of 28 students, 7 walk to school, 12 come by bus and the rest come by car. Write as a fraction in its simplest form the students who come (a) by bus, (b) by car.

- (a) By bus

Answer: $\frac{3}{7}$

(b) By car

Answer: $\frac{9}{28}$

- 13** Imran has £2.40 pocket money. He spends 90p. What fraction of his pocket money does he spend? Give your answer in its simplest form.

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

- 14** Amy scored 17 out of 20 in a spelling test. Ben scored 21 out of 25 in a different test. Who did better, relative to the number of marks available? Show your working.

Answer: Amy

- 15** Sara says: "12 as a fraction of 30 is $\frac{30}{12}$." Explain her mistake and write the correct fraction.

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

- 16** Ivan says: "If A is $\frac{3}{5}$ of B, then B is $\frac{5}{3}$ of A." Show that Ivan is right by choosing a number for B.

Answer: Yes: B = 5 and A = 3

- 17** A cake mixture uses 450 g of flour, 0.3 kg of sugar and 150 g of butter. What fraction of the total mass of these three ingredients is sugar? Give your answer in its simplest form.

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