GCSE Maths: One quantity as a fraction of another (Higher): worksheet

GCSE Maths - Ratio and Proportion - Higher - Lesson 15.1

Name: _____ Date: _____ Score: _____

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

(b) 8 as a fraction of 20

Answer:

(c) 12 as a fraction of 30

Answer:

(d) 9 as a fraction of 36

Answer:

(e) 14 as a fraction of 35

Answer:

(f) 16 as a fraction of 64

Answer:

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

Answer:

3 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:

4 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:

(b) Orange as a fraction of the whole bar

Answer:

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

(a) 20 cm of 1 m

Answer:

(b) 300 g of 2 kg

Answer:

(c) 45 minutes of 3 hours

Answer:

(d) 40p of £2

Answer:

(e) 250 m of 2 km

Answer:

(f) 500 ml of 3 litres

Answer:

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

(a) 9 as a fraction of 6

Answer:

(b) 15 as a fraction of 10

Answer:

(c) 7 as a fraction of 4

Answer:

(d) 90 minutes as a fraction of 1 hour

Answer:

(e) £5 as a fraction of 80p

Answer:

7 **Write the first quantity as a fraction of the second. These involve decimals.**

(a) 0.6 kg of 2.4 kg

Answer:

(b) 0.9 m of 1.5 m

Answer:

(c) £3.50 of £5.60

Answer:

8 **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:

(b) Matches drawn

Answer:

(c) Matches lost

Answer:

9 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:

10 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:

11 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:

(b) By car

Answer:

12 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:

13 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:

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

Answer:

15 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:

16 A is $\frac{3}{8}$ of B, and B is $\frac{4}{9}$ of C. Write A as a fraction of C in its simplest form.

Answer:

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:

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