

Year 5: Multiplying fractions by whole numbers and fractions of amounts: answers

Year 5 - Equivalent Fractions and Mixed Numbers - Lesson 6.7

Answers. Final answers to the worksheet questions. Full step-by-step solutions for every question are free at websink.site/ks2-sats/maths/year-5/ch06-fractions/multiplying-fractions-by-whole-numbers-and-fractions-of/

Exercise 6G Multiplying by whole numbers and fractions of amounts Non-calculator

- 1 The picture shows 3 lots of two fifths. Write the multiplication and work out the answer.



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

- 2 Work out each multiplication.

(a) $3 \times \frac{1}{4}$

Answer: $\frac{3}{4}$

(b) $4 \times \frac{1}{6}$

Answer: $\frac{2}{3}$

(c) $5 \times \frac{1}{3}$

Answer: $1 \frac{2}{3}$

(d) $6 \times \frac{1}{8}$

Answer: $\frac{3}{4}$

- 3 Work out each multiplication. Write each answer as a mixed number.

(a) $4 \times \frac{3}{7}$

Answer: $1 \frac{5}{7}$

(b) $5 \times \frac{2}{3}$

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

(c) $3 \times \frac{5}{8}$

Answer: $1 \frac{7}{8}$

(d) $6 \times \frac{3}{10}$

Answer: $1 \frac{4}{5}$

4 Work out each multiplication. Give each answer in its simplest form.

(a) $4 \times \frac{3}{8}$

Answer: $1 \frac{1}{2}$

(b) $6 \times \frac{5}{12}$

Answer: $2 \frac{1}{2}$

(c) $6 \times \frac{7}{10}$

Answer: $4 \frac{1}{5}$

(d) $8 \times \frac{3}{4}$

Answer: 6

5 Work out each multiplication.

(a) $2 \times 1 \frac{1}{4}$

Answer: $2 \frac{1}{2}$

(b) $3 \times 1 \frac{2}{3}$

Answer: 5

(c) $4 \times 2 \frac{1}{2}$

Answer: 10

(d) $5 \times 1 \frac{3}{10}$

Answer: $6 \frac{1}{2}$

6 Find each missing fraction.

(a) $3 \times \boxed{?} = \frac{9}{10}$

Answer: $\frac{3}{10}$

(b) $3 \times \boxed{?} = \frac{6}{5}$

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

(c) $5 \times \boxed{?} = \frac{15}{8}$

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

7 Work out each fraction of an amount.

(a) $\frac{3}{4}$ of 36

Answer: 27

(b) $\frac{2}{5}$ of 45

Answer: 18

(c) $\frac{5}{8}$ of 48

Answer: 30

(d) $\frac{7}{10}$ of 90

Answer: 63

(e) $\frac{2}{3}$ of 27

Answer: 18

(f) $\frac{5}{6}$ of 42

Answer: 35

8 Work out each answer.

(a) $\frac{2}{5}$ of £35

Answer: £14

(b) $\frac{3}{8}$ of 64 kg

Answer: 24 kg

(c) $\frac{7}{12}$ of 60 minutes

Answer: 35 minutes

(d) $\frac{3}{10}$ of 250 ml

Answer: 75 ml

9 Solve each problem.

(a) Five friends each drink $\frac{3}{4}$ of a litre of water. How much do they drink altogether?

Answer: $3\frac{3}{4}$ litres

- (b) Four bottles each hold $\frac{3}{10}$ of a litre. How much do they hold altogether?

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

10 Solve each problem.

- (a) A cake needs $2\frac{1}{2}$ cups of flour. How much flour is needed for 4 cakes?

Answer: 10 cups

- (b) Each piece of rope is $1\frac{1}{3}$ m long. What is the total length of 3 pieces?

Answer: 4 m

- 11** Tom says, " $3 \times \frac{2}{5} = \frac{6}{15}$." What is wrong? What is the correct answer?

Answer: He multiplied the denominator as well. $1\frac{1}{5}$

12 Always, sometimes or never?

(a)

When you multiply a proper fraction by a whole number bigger than 1, the answer is bigger than the fraction.

Answer: Always

(b) When you multiply a proper fraction by 3, the answer is greater than 1.

Answer: Sometimes

- 13** Which is the odd one out? Explain how you know. $3 \times \frac{2}{3}$ $6 \times \frac{1}{3}$ $4 \times \frac{1}{2}$ $2 \times 1\frac{1}{3}$

Answer: $2 \times 1\frac{1}{3}$

- 14** Challenge! I think of a fraction. I multiply it by 6 and the answer is $4\frac{1}{2}$. What fraction did I think of?

Answer: $\frac{3}{4}$

Exercise 6H Fraction problems Non-calculator

1 Use a bar model to solve each problem.

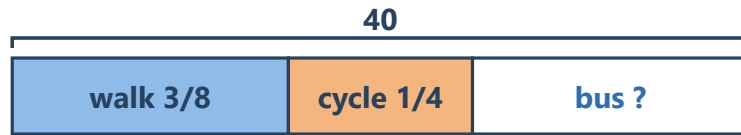
- (a) $\frac{3}{5}$ of the stickers in a pack are shiny. There are 18 shiny stickers. How many stickers are in the pack?

Answer: 30 stickers

- (b) Leo spends $\frac{2}{3}$ of his money on a football. The football costs £24. How much money did Leo have?

Answer: £36

- 2** There are 40 children in a club. $\frac{3}{8}$ walk to school and $\frac{1}{4}$ cycle. The rest come by bus. How many children come by bus?



Answer: 15 children

- 3 A chocolate bar has 12 squares. Ravi eats $\frac{1}{4}$ of the bar and Priya eats $\frac{1}{3}$ of the bar. How many squares are left?

Answer: 5 squares

- 4 Is $\frac{3}{4}$ of 20 more than $\frac{2}{3}$ of 24? Show how you know.

Answer: No. $\frac{3}{4}$ of 20 = 15 and $\frac{2}{3}$ of 24 = 16, so it is less.

- 5 Dev reads three tenths of a book on Monday and two fifths of it on Tuesday.

- (a) What fraction of the book has he read?

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

- (b) What fraction of the book is left to read?

Answer: $\frac{3}{10}$

- 6 Work out $\frac{1}{2} + \frac{1}{4} + \frac{1}{8}$.

Answer: $\frac{7}{8}$

- 7 In a class of 28 children, $\frac{3}{7}$ are boys. How many girls are in the class?

Answer: 16 girls

- 8 Aisha has £60. She spends $\frac{1}{4}$ of it on a book and $\frac{2}{5}$ of it on trainers. How much money does she have left?

Answer: £21

- 9 A tank is $\frac{3}{4}$ full. It holds 36 litres. How many litres does the tank hold when it is full?

Answer: 48 litres

- 10 Mei says, " $3 \times \frac{2}{5}$ and $2 \times \frac{3}{5}$ have the same answer." Is she right? Explain.

Answer: Yes. Both are $\frac{6}{5}$.

- 11 Challenge! One third of a number is 7 less than half of the number. What is the number?

Answer: 42