

GCSE Maths: Understanding fractions (Foundation): answers

GCSE Maths - Fractions - Foundation - Lesson 3.1

Answers. Final answers to the worksheet questions. Full step-by-step solutions for every question are free at websink.site/gcse/maths/ch03-fractions/foundation/understanding-fractions/

Exercise 3A Understanding fractions Non-calculator

1 Write down the fraction of each shape that is shaded.



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



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



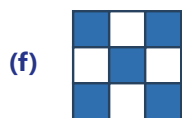
Answer: $\frac{1}{4}$



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



Answer: $\frac{4}{10}$



Answer: $\frac{5}{9}$

2 Copy each bar and shade the fraction given.

(a) $\frac{3}{4}$ of a bar split into 4 parts

Answer: Shade 3 of the 4 parts

(b) $\frac{2}{3}$ of a bar split into 6 parts

Answer: Shade 4 of the 6 parts

- (c) $\frac{5}{8}$ of a bar split into 8 parts

Answer: Shade 5 of the 8 parts

- (d) $\frac{3}{5}$ of a bar split into 10 parts

Answer: Shade 6 of the 10 parts

3 Write down the numerator and the denominator of each fraction.

- (a) $\frac{5}{9}$

Answer: numerator 5, denominator 9

- (b) $\frac{7}{12}$

Answer: numerator 7, denominator 12

- (c) $\frac{11}{20}$

Answer: numerator 11, denominator 20

- (d) $\frac{1}{3}$

Answer: numerator 1, denominator 3

4 Which of these are unit fractions? $\frac{1}{5}$ $\frac{2}{5}$ $\frac{1}{12}$ $\frac{3}{4}$ $\frac{1}{100}$

Answer: $\frac{1}{5}$, $\frac{1}{12}$ and $\frac{1}{100}$

5 Write down the fraction marked by each letter.



- (a) A

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

- (b) B

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

- (c) C

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

6 Write down the fraction marked by each letter.



(a) P

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

(b) Q

Answer: $\frac{5}{4}$ (or $1\frac{1}{4}$)

(c) R

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

7 Write each statement as a fraction.

(a) 3 out of 7 students wear glasses

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

(b) 4 of the 9 flowers are red

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

(c) A bag has 2 yellow and 7 white sweets. What fraction are yellow?

Answer: $\frac{2}{9}$

(d) 5 days out of the 7 days in a week

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

8 Write each division as a fraction, and each fraction as a division.

(a) $3 \div 5$

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

(b) $7 \div 8$

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

(c) $\frac{4}{7}$

Answer: $4 \div 7$

(d) $\frac{11}{3}$

Answer: $11 \div 3$

9 Write each fraction as proper or improper.

(a) $\frac{5}{3}$

Answer: improper

(b) $\frac{3}{8}$

Answer: proper

(c) $\frac{9}{9}$

Answer: improper (it equals 1)

(d) $\frac{12}{7}$

Answer: improper

- 10** A pizza is cut into 8 equal slices. Ali eats 3 slices and Ben eats 2 slices. What fraction of the pizza is eaten altogether? What fraction is left?

Answer: Eaten $\frac{5}{8}$; left $\frac{3}{8}$

- 11** A bag contains 5 red, 3 blue and 2 green counters. Write the fraction that are (a) red (b) not green.

(a) red

Answer: $\frac{5}{10}$

(b) not green

Answer: $\frac{8}{10}$

- 12** Sam says "This rectangle, cut into 4 pieces of different sizes, has $\frac{1}{4}$ shaded." Explain why Sam is wrong.

Answer: The 4 pieces are not equal in size, so one piece is not one quarter.

- 13** The numerator of a fraction is 3. The denominator is 4 more than the numerator. Write down the fraction.

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

- 14** Write down a proper fraction with a denominator of 6 which is not a unit fraction.

Answer: Any of $\frac{2}{6}$, $\frac{3}{6}$, $\frac{4}{6}$, $\frac{5}{6}$

- 15 Challenge.** A fraction has a denominator that is 3 more than its numerator. It is shown by drawing 11 equal parts. What is the fraction if it is a proper fraction and the numerator is as big as possible?

Answer: The denominator is 11, so the numerator is 8: $\frac{8}{11}$