

Questions: Introduction to fractions

Donald Campbell

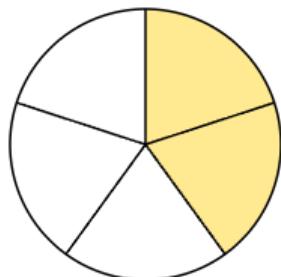
Summary

A selection of questions for the study guide on the introduction to fractions.

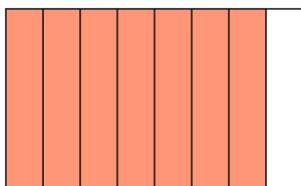
Before attempting these questions, it is highly recommended that you read [Guide: Introduction to numerical fractions](#).

Q1

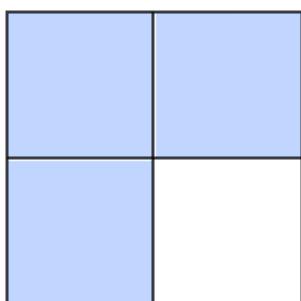
For each figure, write the fraction that represents the shaded area.



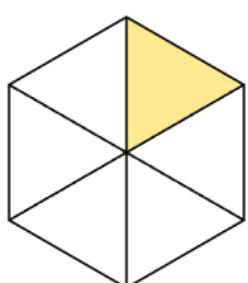
1.1.



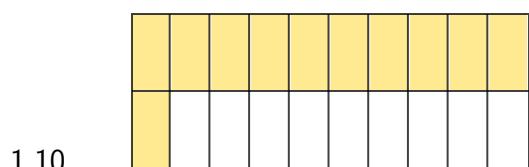
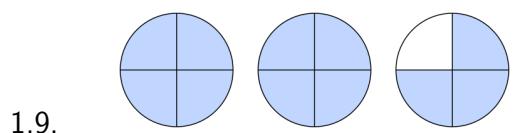
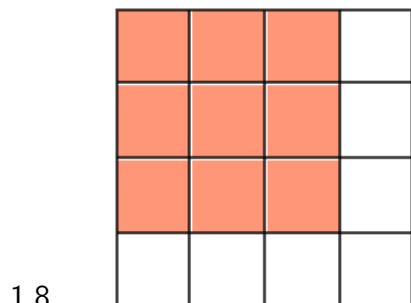
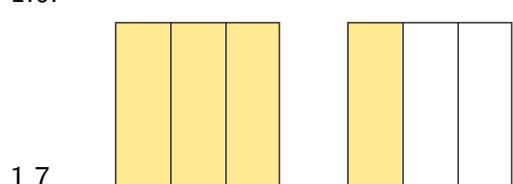
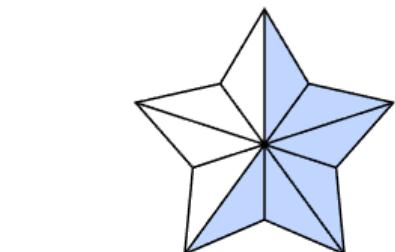
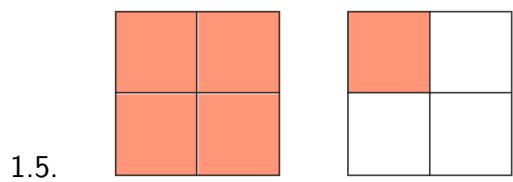
1.2.



1.3.



1.4.



Q2

Convert each mixed number into an improper fraction.

2.1. $1\frac{1}{2}$

2.2. $-2\frac{2}{3}$

2.3. $3\frac{1}{4}$

2.4. $-5\frac{2}{5}$

$$2.5. \quad 4\frac{3}{7}$$

$$2.6. \quad 6\frac{1}{6}$$

$$2.7. \quad -8\frac{3}{5}$$

$$2.8. \quad 10\frac{2}{9}$$

$$2.9. \quad -7\frac{5}{11}$$

$$2.10. \quad 12\frac{3}{4}$$

Q3

Convert each improper fraction into a mixed number.

$$3.1. \quad \frac{5}{2}$$

$$3.2. \quad -\frac{7}{4}$$

$$3.3. \quad \frac{10}{3}$$

$$3.4. \quad -\frac{11}{7}$$

$$3.5. \quad \frac{12}{6}$$

$$3.6. \quad -\frac{25}{6}$$

$$3.7. \quad \frac{31}{9}$$

$$3.8. \quad \frac{50}{11}$$

$$3.9. \quad \frac{64}{-8}$$

$$3.10. \quad -\frac{100}{13}$$

Q4

Find the missing value ? that makes the two fractions equivalent.

$$4.1. \quad \frac{1}{4} = \frac{?}{12}$$

- 4.2. $\frac{2}{3} = \frac{6}{?}$
- 4.3. $\frac{3}{5} = \frac{?}{25}$
- 4.4. $\frac{5}{8} = \frac{?}{16}$
- 4.5. $\frac{3}{4} = \frac{?}{-20}$
- 4.6. $-\frac{1}{6} = \frac{?}{24}$
- 4.7. $\frac{5}{8} = \frac{20}{?}$
- 4.8. $\frac{4}{3} = \frac{?}{18}$
- 4.9. $-\frac{1}{3} = \frac{?}{27}$
- 4.10. $\frac{7}{10} = \frac{70}{?}$
- 4.11. $-\frac{4}{5} = \frac{?}{30}$
- 4.12. $\frac{11}{12} = \frac{?}{60}$
- 4.13. $\frac{3}{-7} = \frac{?}{21}$
- 4.14. $\frac{8}{9} = \frac{32}{?}$
- 4.15. $\frac{6}{7} = -\frac{?}{-49}$

Q5

Write each fraction in its simplest form.

- 5.1. $\frac{4}{8}$
- 5.2. $\frac{3}{9}$
- 5.3. $\frac{6}{10}$
- 5.4. $\frac{9}{12}$
- 5.5. $\frac{15}{25}$

- 5.6. $\frac{7}{21}$
5.7. $\frac{20}{30}$
5.8. $\frac{35}{49}$
5.9. $\frac{48}{72}$
5.10. $\frac{100}{120}$

Q6

Convert each fraction into its alternative form and fully simplify the result.

- If an improper fraction is given, convert it into a mixed number.
- If a mixed number is given, convert it into an improper fraction.

- 6.1. $\frac{6}{4}$
6.2. $2\frac{2}{8}$
6.3. $\frac{12}{10}$
6.4. $-\frac{15}{9}$
6.5. $3\frac{4}{6}$
6.6. $-1\frac{6}{8}$
6.7. $\frac{20}{12}$
6.8. $\frac{30}{25}$
6.9. $5\frac{10}{15}$
6.10. $-\frac{45}{20}$
6.11. $4\frac{8}{10}$
6.12. $\frac{50}{30}$
6.13. $\frac{75}{-50}$

$$6.14. \quad 6\frac{12}{16}$$

$$6.15. \quad -2\frac{14}{21}$$

After attempting the questions above, please click [this link](#) to find the answers.

Version history and licensing

v1.0: initial version created 12/25 by Donald Campbell as part of a University of St Andrews VIP project.

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