

Questions: Introduction to fractions

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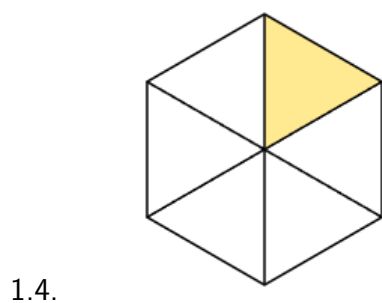
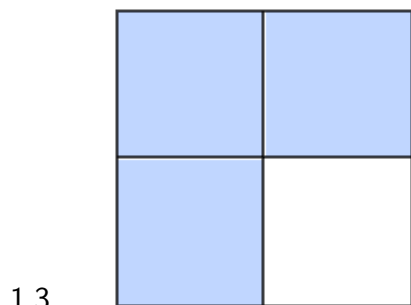
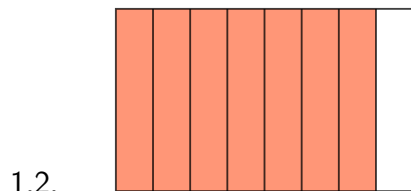
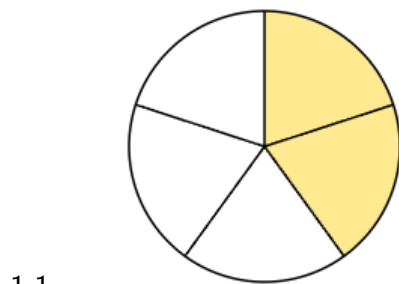
Summary

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

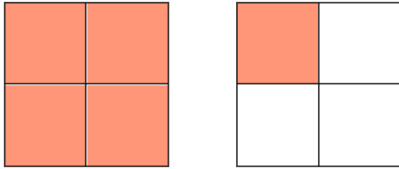
Before attempting these questions, it is highly recommended that you read [Guide: Introduction to numerical fractions](#).

Q1

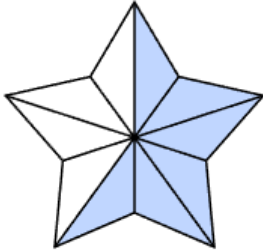
For each figure, write the fraction that represents the shaded area.



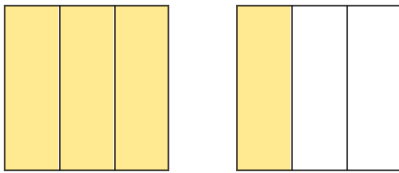
1.5.



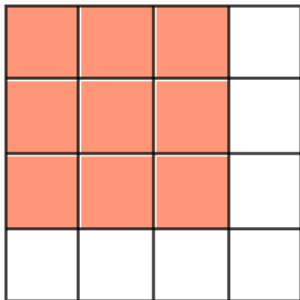
1.6.



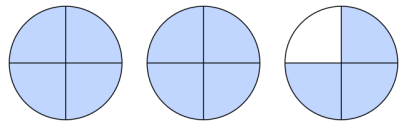
1.7.



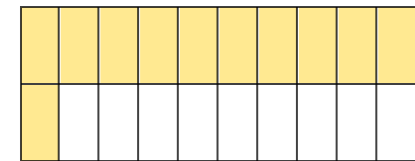
1.8.



1.9.



1.10.



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

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

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

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

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

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

Q3

Convert each improper fraction into a mixed number.

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

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

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

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

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

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

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

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

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

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

Q4

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

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

$$4.2. \quad \frac{2}{3} = \frac{6}{?}$$

$$4.3. \quad \frac{3}{5} = \frac{?}{25}$$

$$4.4. \quad \frac{5}{8} = \frac{?}{16}$$

$$4.5. \quad \frac{3}{4} = \frac{?}{-20}$$

$$4.6. \quad -\frac{1}{6} = \frac{?}{24}$$

$$4.7. \quad \frac{5}{8} = \frac{20}{?}$$

$$4.8. \quad \frac{4}{3} = \frac{?}{18}$$

$$4.9. \quad -\frac{1}{3} = \frac{?}{27}$$

$$4.10. \quad \frac{7}{10} = \frac{70}{?}$$

$$4.11. \quad -\frac{4}{5} = \frac{?}{30}$$

$$4.12. \quad \frac{11}{12} = \frac{?}{60}$$

$$4.13. \quad \frac{3}{-7} = \frac{?}{21}$$

$$4.14. \quad \frac{8}{9} = \frac{32}{?}$$

$$4.15. \quad \frac{6}{7} = -\frac{?}{-49}$$

Q5

Write each fraction in its simplest form.

$$5.1. \quad \frac{4}{8}$$

$$5.2. \quad \frac{3}{9}$$

$$5.3. \quad \frac{6}{10}$$

$$5.4. \quad \frac{9}{12}$$

$$5.5. \quad \frac{15}{25}$$

$$5.6. \quad \frac{7}{21}$$

$$5.7. \quad \frac{20}{30}$$

$$5.8. \quad \frac{35}{49}$$

$$5.9. \quad \frac{48}{72}$$

$$5.10. \quad \frac{100}{120}$$

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.

$$6.1. \quad \frac{6}{4}$$

$$6.2. \quad 2\frac{2}{8}$$

$$6.3. \quad \frac{12}{10}$$

$$6.4. \quad -\frac{15}{9}$$

$$6.5. \quad 3\frac{4}{6}$$

$$6.6. \quad -1\frac{6}{8}$$

$$6.7. \quad \frac{20}{12}$$

$$6.8. \quad \frac{30}{25}$$

$$6.9. \quad 5\frac{10}{15}$$

$$6.10. \quad -\frac{45}{20}$$

$$6.11. \quad 4\frac{8}{10}$$

$$6.12. \quad \frac{50}{30}$$

$$6.13. \quad \frac{75}{-50}$$

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

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

[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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