



# Fractions (part 2)

## Exercises

### Learning Skills

#### Introduction:

To reinforce what was learnt in [part 1](#) of this topic we have included some exercises for you to try out. Answers can be found at the end of this document. Contact one of our Maths Advisers if you have any problems.

#### 1. Convert these mixed numerals to improper fraction form

1.1.  $2\frac{2}{7}$

1.2.  $3\frac{3}{4}$

1.3.  $1\frac{7}{11}$

1.4.  $12\frac{1}{10}$

#### 2. Convert these fractions to mixed numeral form

2.1.  $\frac{12}{5}$

2.2.  $\frac{16}{7}$

2.3.  $\frac{24}{8}$

2.4.  $\frac{56}{9}$

#### 3. Find the missing value to make the fractions equivalent

3.1.  $\frac{2}{7} = \frac{?}{28}$

3.2.  $\frac{3}{5} = \frac{?}{25}$

3.3.  $\frac{4}{9} = \frac{?}{36}$

3.4.  $\frac{5}{6} = \frac{?}{66}$

#### 4. By forming equivalent fractions find which fraction is bigger

4.1.  $\frac{5}{8}$  or  $\frac{3}{4}$

4.2.  $\frac{3}{11}$  or  $\frac{1}{6}$

4.3.  $\frac{16}{24}$  or  $\frac{5}{8}$

#### 5. Simplify these fractions

5.1.  $\frac{4}{14}$

5.2.  $\frac{25}{40}$

5.3.  $\frac{12}{15}$

5.4.  $\frac{18}{12}$

5.5.  $\frac{68}{36}$

#### 6. Evaluate

6.1.  $\frac{5}{6} - \frac{1}{2}$

6.2.  $\frac{1}{8} + \frac{2}{5}$

6.3.  $\frac{4}{5} - \frac{2}{3}$

6.4.  $\frac{3}{4} + \frac{5}{6}$

6.5.  $\frac{11}{15} - \frac{5}{12}$

**7. Evaluate, giving answers in simplest form**

7.1.  $\frac{1}{5} \times \frac{4}{7}$

7.3.  $\frac{3}{12} \times \frac{4}{5}$

7.5.  $\frac{5}{8} \times 16$

7.2.  $\frac{4}{9} \times \frac{2}{3}$

7.4.  $\frac{6}{7} \times \frac{3}{10}$

7.6.  $6 \times \frac{5}{8}$

**8. Evaluate, giving answers in simplest form**

8.1.  $\frac{2}{3} \div \frac{7}{10}$

8.2.  $\frac{1}{6} \div \frac{5}{6}$

8.3.  $\frac{3}{4} \div \frac{1}{5}$

8.4.  $\frac{5}{9} \div 10$

8.5.  $8 \div \frac{10}{13}$

## 9. Answers

$$1.1. 2\frac{2}{7} = \frac{7}{7} + \frac{7}{7} + \frac{2}{7} = \frac{16}{7}$$

$$1.3. 1\frac{7}{11} = \frac{11+7}{11} = \frac{18}{11}$$

$$1.2. 3\frac{3}{4} = \frac{4}{4} + \frac{4}{4} + \frac{4}{4} + \frac{3}{4} = \frac{15}{4}$$

$$1.4. 12\frac{6}{10} = \frac{12 \times 10 + 6}{10} = \frac{126}{10}$$

$$2.1. \frac{12}{5} = 2\frac{2}{5}$$

$$2.2. \frac{16}{7} = 2\frac{2}{7}$$

$$2.3. \frac{24}{8} = 3$$

$$2.4. \frac{57}{9} = 6\frac{3}{9}$$

$$3.1. ? = 8$$

$$3.2. ? = 15$$

$$3.3. ? = 16$$

$$3.4. ? = 55$$

$$4.1. \text{convert to 8ths} \quad \frac{5}{8} \rightarrow \frac{5}{8}, \quad \frac{3^{\times 2}}{4_{\times 2}} \rightarrow \frac{6}{8} \quad \frac{3}{4} \text{ is bigger}$$

$$4.2. \text{convert to 66ths} \quad \frac{3^{\times 6}}{11_{\times 6}} \rightarrow \frac{18}{66}, \quad \frac{1^{\times 11}}{6_{\times 11}} \rightarrow \frac{6}{66} \quad \frac{3}{11} \text{ is bigger}$$

$$4.3. \text{convert to 24ths} \quad \frac{16}{24} \rightarrow \frac{16}{24}, \quad \frac{5}{8} \rightarrow \frac{15}{24} \quad \frac{16}{24} \text{ is bigger}$$

$$5.1. \frac{4^{\div 2}}{14_{\div 2}} = \frac{2}{7}$$

$$5.3. \frac{12^{\div 3}}{15_{\div 3}} = \frac{4}{5}$$

$$5.5. \frac{68^{\div 2}}{36_{\div 2}} = \frac{34^{\div 2}}{18_{\div 2}} = \frac{17}{9} = 1\frac{8}{9}$$

$$5.2. \frac{25^{\div 5}}{40_{\div 5}} = \frac{5}{8}$$

$$5.4. \frac{18^{\div 6}}{12_{\div 6}} = \frac{3}{2} = 1\frac{1}{2}$$

$$6.1. \text{LCD} = 6 \quad \frac{5}{6} - \frac{1^{\times 3}}{2_{\times 3}} = \frac{5}{6} - \frac{3}{6} = \frac{2}{6} = \frac{1}{3}$$

$$6.2. \text{LCD} = 40 \quad \frac{1^{\times 5}}{8_{\times 5}} + \frac{2^{\times 8}}{5_{\times 8}} = \frac{5}{40} + \frac{16}{40} = \frac{21}{40}$$

$$6.3. \text{LCD} = 15 \quad \frac{4^{\times 3}}{5_{\times 3}} - \frac{2^{\times 5}}{3_{\times 5}} = \frac{12}{15} - \frac{10}{15} = \frac{2}{15}$$

$$6.4. \text{LCD} = 12 \quad \frac{3^{\times 3}}{4_{\times 3}} + \frac{5^{\times 2}}{6_{\times 2}} = \frac{9}{12} + \frac{10}{12} = \frac{19}{12} = 1\frac{7}{12}$$

$$6.5. \text{LCD} = 60 \quad \frac{11^{\times 4}}{15_{\times 4}} - \frac{5^{\times 5}}{12_{\times 5}} = \frac{44}{60} - \frac{25}{60} = \frac{19}{60}$$

$$7.1. \frac{1}{5} \times \frac{4}{7} = \frac{1 \times 4}{5 \times 7} = \frac{4}{35}$$

$$7.2. \frac{4}{9} \times \frac{2}{3} = \frac{4 \times 2}{9 \times 3} = \frac{8}{27}$$

$$7.3. \frac{3}{12} \times \frac{4}{5} = \frac{3 \times 4}{12 \times 5} = \frac{3 \times 1}{3 \times 5} = \frac{1}{5}$$

$$7.4. \frac{6}{7} \times \frac{3}{10} = \frac{6^{\div 2=3} \times 3}{7 \times 10_{\div 2=5}} = \frac{3 \times 3}{7 \times 5} = \frac{9}{35}$$

$$7.5. \frac{5}{8} \times 16 = \frac{5}{8} \times \frac{16}{1} = \frac{5 \times 16^{\div 8=2}}{8_{\div 8=1} \times 1} = \frac{5 \times 2}{1 \times 1} = \frac{10}{1} = 10$$

$$7.6. 6 \times \frac{5}{8} = \frac{6}{1} \times \frac{5}{8} = \frac{6^{\div 2=3} \times 5}{1 \times 8_{\div 2=4}} = \frac{15}{4} = 3\frac{3}{4}$$

$$8.1. \frac{2}{3} \div \frac{7}{10} = \frac{2}{3} \times \frac{10}{7} = \frac{20}{21}$$

$$8.2. \frac{1}{6} \div \frac{5}{6} = \frac{1}{6} \times \frac{6}{5} = \frac{6}{30} = \frac{1}{5}$$

$$8.3. \frac{3}{4} \div \frac{1}{5} = \frac{3}{4} \times \frac{5}{1} = \frac{15}{4} = 3\frac{3}{4}$$

$$8.4. \frac{5}{9} \div 10 = \frac{5}{9} \div \frac{10}{1} = \frac{5}{9} \times \frac{1}{10} = \frac{5^{\div 5=1}}{9} \times \frac{1}{10_{\div 5=2}} = \frac{1}{9} \times \frac{1}{2} = \frac{1}{18}$$

$$8.5. 8 \div \frac{10}{13} = \frac{8}{1} \div \frac{10}{13} = \frac{8}{1} \times \frac{13}{10} = \frac{8^{\div 2=4}}{1} \times \frac{13}{10_{\div 2=5}} = \frac{4}{1} \times \frac{13}{5} = \frac{52}{5} = 10\frac{2}{5}$$

## 10. For more information

Visit our Learning Skills website at <http://www.csu.edu.au/division/studserv/maths/index.htm>

Part 1 of this document can be found at <http://www.csu.edu.au/division/studserv/maths/teachered.htm>

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