

KS3 – Fractions

Section A – Equivalent Fractions

Q1 (3 marks)

Complete the equivalent fractions.

a) $\frac{1}{2} = \frac{\square}{10}$

b) $\frac{3}{4} = \frac{\square}{20}$

c) $\frac{5}{6} = \frac{\square}{24}$

Q2 (3 marks)

Complete the equivalent fractions.

a) $\frac{2}{5} = \frac{6}{\square}$

b) $\frac{4}{7} = \frac{20}{\square}$

c) $\frac{7}{9} = \frac{35}{\square}$

Q3 (3 marks)

Complete the equivalent fractions.

a) $\frac{3}{8} = \frac{12}{\square}$

b) $\frac{5}{12} = \frac{\square}{36}$

c) $\frac{14}{21} = \frac{2}{\square}$

Q4 (2 marks)

Which two fractions are equivalent?

$\frac{3}{5}$ $\frac{8}{12}$ $\frac{6}{10}$ $\frac{9}{20}$

Challenge

Q5 (2 marks)

Find the missing values.

a) $\frac{7}{12} = \frac{21}{x}$

b) $\frac{y}{45} = \frac{4}{5}$

Section B – Simplifying Fractions

Q6 (3 marks)

Simplify each fraction.

a) $\frac{6}{10}$

b) $\frac{12}{18}$

c) $\frac{15}{25}$

Q7 (3 marks)

Simplify each fraction fully.

a) $\frac{24}{36}$

b) $\frac{35}{49}$

c) $\frac{42}{63}$

Q8 (3 marks)

Simplify each fraction fully.

a) $\frac{48}{72}$

b) $\frac{75}{105}$

c) $\frac{84}{126}$

Challenge

Q9 (2 marks)

A fraction simplifies to $\frac{3}{5}$.

Its numerator and denominator add to 64.

Find the original fraction.

Section C – Adding & Subtracting Fractions

Q10 (3 marks)

Work out. Give each answer in its simplest form.

a) $\frac{2}{7} + \frac{3}{7}$

b) $\frac{7}{10} - \frac{3}{10}$

c) $\frac{5}{12} + \frac{1}{12}$

Q11 (3 marks)

Work out. Give each answer in its simplest form.

a) $\frac{1}{2} + \frac{1}{4}$

b) $\frac{5}{6} - \frac{1}{3}$

c) $\frac{2}{5} + \frac{3}{10}$

Q12 (3 marks)

Work out. Give each answer in its simplest form.

a) $\frac{2}{3} + \frac{3}{5}$

b) $\frac{7}{8} - \frac{1}{6}$

c) $\frac{5}{12} + \frac{7}{18}$

Q13 (3 marks)

Work out. Give each answer in its simplest form.

a) $1\frac{1}{4} + \frac{2}{3}$

b) $2\frac{1}{2} - \frac{3}{4}$

c) $1\frac{2}{5} + 2\frac{1}{3}$

Challenge

Q14 (2 marks)

Maya drinks $\frac{3}{8}$ of a litre of water in the morning and $\frac{5}{12}$ of a litre in the afternoon.

How much water does she drink altogether?

Give your answer as a fraction in its simplest form.

Section D – Multiplying & Dividing Fractions

Q15 (3 marks)

Work out. Give each answer in its simplest form.

a) $\frac{2}{3} \times \frac{3}{5}$

b) $\frac{4}{7} \times \frac{2}{3}$

c) $\frac{5}{8} \times \frac{4}{15}$

Q16 (3 marks)

Work out. Give each answer in its simplest form.

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

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

c) $\frac{7}{10} \times 15$

Q17 (3 marks)

Work out. Give each answer in its simplest form.

a) $\frac{2}{3} \div \frac{1}{4}$

b) $\frac{5}{8} \div \frac{3}{4}$

c) $\frac{7}{9} \div \frac{14}{15}$

Q18 (3 marks)

Work out. Give each answer in its simplest form.

a) $1\frac{1}{2} \times \frac{2}{5}$

b) $2\frac{1}{4} \times 1\frac{1}{3}$

c) $3\frac{1}{2} \div 1\frac{3}{4}$

Challenge

Q19 (2 marks)

A rectangle has length $2\frac{1}{2}$ m and width $1\frac{3}{5}$ m.

Work out the area of the rectangle.

Section E – Fractions of Amounts

Q20 (3 marks)

Work out.

a) $\frac{1}{4}$ of 36

b) $\frac{1}{5}$ of 65

c) $\frac{1}{8}$ of 96

Q21 (3 marks)

Work out.

a) $\frac{3}{5}$ of 40

b) $\frac{5}{6}$ of 72

c) $\frac{7}{8}$ of 120

Q22 (3 marks)

Work out.

a) $\frac{4}{7}$ of 63

b) $\frac{7}{12}$ of 108

c) $\frac{11}{15}$ of 135

Q23 (2 marks)

There are 240 students in a school year.

$\frac{3}{8}$ of the students travel to school by bus.

How many students travel by bus?

Challenge

Q24 (2 marks)

A shop has 360 notebooks.

On Monday, it sells $\frac{2}{5}$ of the notebooks.

On Tuesday, it sells $\frac{1}{3}$ of the original 360 notebooks.

How many notebooks remain after Tuesday?

Total: ____ / 60

Percentage: ____%