



1 Work out $\frac{2}{3} \div 4$

Give your answer in its simplest form.

(2 marks)

$$= \frac{2}{3} \div 4$$

$$= \frac{2}{3} \times \frac{1}{4}$$

$$= \frac{2}{12}$$

$$\boxed{\frac{1}{6}}$$

2 Work out $\frac{5}{8} \div \frac{3}{4}$

Give your answer in its simplest form.

(2 marks)

$$= \frac{5}{8} \div \frac{3}{4}$$

Keep, flip, multiply

$$= \frac{5}{8} \times \frac{4}{3}$$

$$= \frac{20}{24}$$

$$\boxed{\frac{5}{6}}$$

3

Work out $\frac{4}{9} \div \frac{2}{3}$

Give your answer in its simplest form.

(2 marks)

$$= \frac{4}{9} \div \frac{2}{3}$$

$$= \frac{4}{9} \times \frac{3}{2}$$

$$= \frac{12}{18}$$

$$\boxed{\frac{2}{3}}$$

4

Anna has $2\frac{1}{4}$ metres of ribbon.She cuts it into pieces. Each piece is $\frac{3}{8}$ metre long.

Work out the number of pieces Anna can cut.

(3 marks)

Number of pieces = total $\div$ one piece

$$2\frac{1}{4} = \frac{9}{4}$$

$$= \frac{9}{4} \div \frac{3}{8}$$

$$= \frac{9}{4} \times \frac{8}{3}$$

$$= \frac{72}{12}$$

$$\boxed{6 \text{ pieces}}$$

5

Work out $1\frac{3}{4} \div 2\frac{1}{3}$

Give your answer as a fraction in its simplest form.

(3 marks)

$$1\frac{3}{4} = \frac{7}{4}$$

$$2\frac{1}{3} = \frac{7}{3}$$

$$= \frac{7}{4} \div \frac{7}{3}$$

$$= \frac{7}{4} \times \frac{3}{7}$$

$$= \frac{21}{28}$$

$$\boxed{\frac{3}{4}}$$

6

A jug holds $5\frac{1}{2}$ litres of squash.Each glass holds $\frac{3}{4}$ litre.

Work out the number of glasses that can be filled completely.

(3 marks)

$$5\frac{1}{2} = \frac{11}{2}$$

$$= \frac{11}{2} \div \frac{3}{4}$$

$$= \frac{11}{2} \times \frac{4}{3}$$

$$= \frac{44}{6}$$

$$= 7\frac{1}{3}$$

Only whole glasses count

$$\boxed{7 \text{ glasses}}$$

7

Work out $3\frac{1}{3} \div 2\frac{1}{2}$

Give your answer as a mixed number in its simplest form.

(3 marks)

Write as improper fractions

$$3\frac{1}{3} = \frac{10}{3} \text{ and } 2\frac{1}{2} = \frac{5}{2}$$

To divide by $5/2$, multiply by its reciprocal $2/5$

$$(5/2) \times (2/5) = 1, \text{ so this undoes multiplication by } 5/2$$

Dividing by $\frac{5}{2}$ is the same as multiplying by $\frac{2}{5}$

$$\frac{10}{3} \times \frac{2}{5} = \frac{20}{15}$$

Simplify

$$\frac{20}{15} = \frac{4}{3} = 1\frac{1}{3}$$

$$\boxed{1\frac{1}{3}}$$

8

Work out $(1\frac{1}{2} + 2\frac{1}{4}) \div 1\frac{1}{8}$

Give your answer as a mixed number in its simplest form.

(4 marks)

Brackets first

$$1\frac{1}{2} + 2\frac{1}{4} = 3\frac{3}{4}$$

$$3\frac{3}{4} = \frac{15}{4}$$

$$1\frac{1}{8} = \frac{9}{8}$$

$$= \frac{15}{4} \div \frac{9}{8}$$

$$= \frac{15}{4} \times \frac{8}{9}$$

$$= \frac{120}{36}$$

$$= \frac{10}{3}$$

$$\boxed{3\frac{1}{3}}$$

9

A rectangle has area $5\frac{5}{8} \text{ cm}^2$.

Its length is $3\frac{3}{4} \text{ cm}$.

Work out the width of the rectangle.

Give your answer as a mixed number.

(4 marks)

Width = area $\div$ length

$$5\frac{5}{8} = \frac{45}{8}$$

$$3\frac{3}{4} = \frac{15}{4}$$

$$= \frac{45}{8} \div \frac{15}{4}$$

$$= \frac{45}{8} \times \frac{4}{15}$$

$$= \frac{180}{120}$$

$$= \frac{3}{2}$$

$$\boxed{1\frac{1}{2} \text{ cm}}$$

10

Work out $(\frac{1}{2} + \frac{2}{5}) \div \frac{3}{10}$

(4 marks)

First add the fractions in the bracket using denominator 10

$$\frac{1}{2} = \frac{5}{10} \text{ and } \frac{2}{5} = \frac{4}{10}, \text{ so the bracket is } \frac{9}{10}$$

Dividing by $\frac{3}{10}$ is the same as multiplying by $\frac{10}{3}$

$$\frac{9}{10} \times \frac{10}{3} = \frac{90}{30} = 3$$

$$\boxed{3}$$