



1

- a. Write down the denominator of the fraction $\frac{15}{35}$
- b. Write $\frac{15}{35}$ in its simplest form.
- c. Write $\frac{24}{36}$ in its simplest form.

(3 marks)

a) Denominator = the bottom number

$$\boxed{35}$$

b) $\div 5$ top and bottom

$$\frac{15}{35} = \frac{3}{7}$$

$$\boxed{\frac{3}{7}}$$

c) HCF of 24 and 36 is 12

$$\frac{24}{36} = \frac{2}{3}$$

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

2

a. Find the values of a and b .

$$\frac{3}{4} = \frac{a}{20} = \frac{21}{b}$$

b. Write = or $\neq$ between each pair of fractions.

$$(i) \frac{6}{9} \text{ — } \frac{2}{3} \quad (ii) \frac{10}{12} \text{ — } \frac{4}{5}$$

(4 marks)

a) Do the same to the top and the bottom

$$4 \times 5 = 20, \text{ so } a = 3 \times 5 = 15$$

$$3 \times 7 = 21, \text{ so } b = 4 \times 7 = 28$$

$$a = 15, b = 28$$

b)

$$(i) \frac{6}{9} = \frac{2}{3} (\div 3)$$

$$(ii) \frac{10}{12} = \frac{5}{6} (\div 2), \text{ and } \frac{5}{6} \text{ is not } \frac{4}{5}$$

$$(i) = (ii) \neq$$

3

Choose the correct symbol, $<$, $>$ or $=$, to make each statement true.

$$a. \frac{3}{5} \text{ — } \frac{7}{10}$$

$$b. \frac{4}{6} \text{ — } \frac{2}{3}$$

(2 marks)

$$(a) \frac{3}{5} = \frac{6}{10}, \text{ and } \frac{6}{10} < \frac{7}{10}, \text{ so the symbol is } <$$

$$(b) 4/6 \text{ simplifies to } 2/3, \text{ so the symbol is } =$$

4

Write these fractions in order of size, starting with the smallest.

$$\frac{2}{3}, \frac{3}{4}, \frac{7}{12}, \frac{5}{6}$$

(2 marks)

Use a common denominator of 12

$$\frac{2}{3} = \frac{8}{12}, \frac{3}{4} = \frac{9}{12}, \frac{7}{12} = \frac{7}{12}, \frac{5}{6} = \frac{10}{12}$$

$$\text{In order: } \frac{7}{12}, \frac{2}{3}, \frac{3}{4}, \frac{5}{6}$$

$$\frac{7}{12}, \frac{2}{3}, \frac{3}{4}, \frac{5}{6}$$

5

a. Write $3\frac{2}{5}$ as an improper fraction.b. Write $\frac{29}{6}$ as a mixed number.

(2 marks)

a)

$$3 \times 5 = 15$$

$$15 + 2 = 17$$

$$\frac{17}{5}$$

b)

$$29 \div 6 = 4 \text{ remainder } 5$$

$$4\frac{5}{6}$$

6

a. Write $\frac{3}{8}$ as a decimal.

b. Write 0.45 as a fraction in its simplest form.

c. Which is bigger, $\frac{7}{20}$ or 0.36? Show how you decide.

(3 marks)

a)

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

$$3.000 \div 8 = 0.375$$

$$0.375$$

b)

$$0.45 = \frac{45}{100}$$

$$= \frac{9}{20} (\div 5)$$

$$\frac{9}{20}$$

c)

$$\frac{7}{20} = \frac{35}{100} = 0.35 (\times 5)$$

$$0.36 > 0.35$$

$$0.36 \text{ is bigger}$$

7

Maya has £64.

She spends $\frac{3}{8}$ of her money.

Work out how much money Maya has left.

(3 marks)

$$£64 \div 8 = £8, \text{ so } \frac{3}{8} \text{ of } £64 = 3 \times £8 = £24$$

$$\text{Money left} = £64 - £24 = £40$$

£40

8

Work out

a. $\frac{3}{4} \times 12$

b. $\frac{2}{5} \div 4$

c. $5 - 2\frac{3}{8}$

(3 marks)

a)

$$\frac{3}{4} \times 12 = \frac{36}{4}$$

$$= 9$$

9

b)

$$\frac{2}{5} \div 4 = \frac{2}{5} \times \frac{1}{4}$$

$$= \frac{2}{20}$$

$$= \frac{1}{10}$$

$\frac{1}{10}$

c)

$$5 - 2 = 3$$

$$3 - \frac{3}{8} = 2\frac{5}{8}$$

$2\frac{5}{8}$

9

Work out $4\frac{2}{5} - 1\frac{3}{4}$

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

(3 marks)

Write as improper fractions

$$4\frac{2}{5} = \frac{22}{5} \text{ and } 1\frac{3}{4} = \frac{7}{4}$$

Use denominator 20

$$\frac{22}{5} = \frac{88}{20} \text{ and } \frac{7}{4} = \frac{35}{20}$$

$$\frac{88}{20} - \frac{35}{20} = \frac{53}{20} = 2\frac{13}{20}$$

$$\boxed{2\frac{13}{20}}$$

10

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 $2/5$

$$(10/3) \times (2/5) = 1, \text{ so this undoes multiplication by } 5/2$$

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

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

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

11

a. Work out $1\frac{3}{4} + 2\frac{5}{6}$

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

b. Work out $2\frac{1}{2} \times 1\frac{1}{5}$

(4 marks)

a) $1\frac{3}{4} = \frac{7}{4}$ and $2\frac{5}{6} = \frac{17}{6}$. Using denominator 12: $\frac{7}{4} = \frac{21}{12}$ and $\frac{17}{6} = \frac{34}{12}$

a) $\frac{21}{12} + \frac{34}{12} = \frac{55}{12} = 4\frac{7}{12}$

b) $2\frac{1}{2} = \frac{5}{2}$ and $1\frac{1}{5} = \frac{6}{5}$, so $\frac{5}{2} \times \frac{6}{5} = \frac{30}{10} = 3$

12

Amara bakes cakes. Each cake needs $2\frac{1}{4}$ cups of flour.

a. How many cups of flour does she need for 3 cakes? Give your answer as a mixed number.

b. Amara has 10 cups of flour. Work out how many whole cakes she can make, and how much flour she has left over.

(4 marks)

a)

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

$$\frac{9}{4} \times 3 = \frac{27}{4}$$

$$= 6\frac{3}{4}$$

$$\boxed{6\frac{3}{4} \text{ cups}}$$

b)

$$10 \div \frac{9}{4} = 10 \times \frac{4}{9}$$

$$= \frac{40}{9} = 4\frac{4}{9}$$

Only whole cakes count

$$4 \text{ cakes use } 4 \times \frac{9}{4} = 9 \text{ cups}$$

$$10 - 9 = 1$$

$$\boxed{4 \text{ cakes, 1 cup left over}}$$