



- 1 Fill in the missing number.

$$\frac{2}{5} = \frac{?}{20}$$

(1 mark)

$$5 \times 4 = 20$$

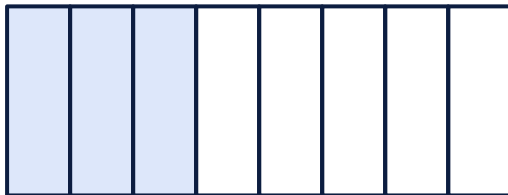
$$\text{so } 2 \times 4 = 8$$

8

- 2 The shape is divided into 8 equal parts.

3 of the parts are shaded.

Write down the fraction of the shape that is shaded.



(1 mark)

3 of the 8 equal parts are shaded

The fraction shaded is $\frac{3}{8}$

$\frac{3}{8}$

- 3 Write 7 as a fraction of 20.

(1 mark)

7 out of 20 is written as the fraction $\frac{7}{20}$

$\frac{7}{20}$

4 Fill in the missing numbers.

a. $\frac{3}{4} = \frac{?}{12}$

b. $\frac{5}{6} = \frac{20}{?}$

(2 marks)

a)

$$4 \times 3 = 12$$

$$3 \times 3 = 9$$

$$\boxed{9}$$

b)

$$5 \times 4 = 20$$

$$6 \times 4 = 24$$

$$\boxed{24}$$

5 A grid has 20 equal squares. 12 of the squares are shaded.

What fraction of the grid is shaded? Give your answer in its simplest form.

(2 marks)

$$\text{shaded} = \frac{12}{20}$$

$\div 4$ on top and bottom

$$\boxed{\frac{3}{5}}$$

6 Write the fraction $\frac{12}{18}$ in its simplest form.

(1 mark)

The highest common factor of 12 and 18 is 6

$$12 \div 6 = 2 \text{ and } 18 \div 6 = 3, \text{ so } \frac{12}{18} = \frac{2}{3}$$

Dividing numerator and denominator by the same non-zero number preserves the fraction's value. Using the highest common factor leaves no further whole-number factor to cancel

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

- 7 Three of these fractions are equivalent to $\frac{3}{4}$.

$$\frac{6}{8} \quad \frac{9}{12} \quad \frac{12}{16} \quad \frac{15}{24}$$

Write down the fraction that is **not** equivalent to $\frac{3}{4}$.

(1 mark)

$$\frac{6}{8} = \frac{3}{4}, \quad \frac{9}{12} = \frac{3}{4} \text{ and } \frac{12}{16} = \frac{3}{4}$$

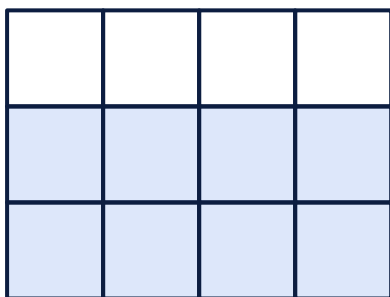
$\frac{15}{24}$ simplifies to $\frac{5}{8}$, so $\frac{15}{24}$ is not equivalent to $\frac{3}{4}$

$$\boxed{\frac{15}{24}}$$

- 8 The grid is made of 12 equal squares.

8 of the squares are shaded.

Write the fraction of the grid that is shaded. Give your fraction in its simplest form.



(2 marks)

8 out of 12 squares are shaded, giving $\frac{8}{12}$

Divide top and bottom by 4

$$\frac{8}{12} = \frac{2}{3}$$

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

9

Write each as asked.

a. Write $\frac{13}{4}$ as a mixed number.b. Write $2\frac{3}{5}$ as an improper fraction.

(2 marks)

a)

$$13 \div 4 = 3 \text{ remainder } 1$$

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

b)

$$2 \times 5 = 10$$

$$10 + 3 = 13$$

$$\frac{13}{5}$$

10

Ravi says that $\frac{6}{9}$ and $\frac{8}{12}$ are equivalent fractions.

Is Ravi correct? Show how you decide.

(2 marks)

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

$$\frac{8}{12} = \frac{2}{3} (\div 4)$$

$$\text{Yes - both are } \frac{2}{3}$$

11

There are 32 students in a class.

20 of the students walk to school.

Write the fraction of the students who walk to school. Give your fraction in its simplest form.

(2 marks)

$$20 \text{ out of } 32 \text{ students walk, giving } \frac{20}{32}$$

Divide top and bottom by 4

$$\frac{20}{32} = \frac{5}{8}$$

$$\frac{5}{8}$$

12 Dev has 30 pens.

He gives away 12 of the pens.

Write the fraction of the pens that Dev has left. Give your fraction in its simplest form.

(2 marks)

$$\text{Pens left} = 30 - 12 = 18$$

$$\text{Fraction left} = \frac{18}{30}$$

Divide top and bottom by 6

$$\frac{18}{30} = \frac{3}{5}$$

$$\boxed{\frac{3}{5}}$$

13 A sunflower was 40 cm tall.

It is now 55 cm tall.

Write the increase in height as a fraction of the original height. Give your fraction in its simplest form.

(2 marks)

$$\text{Increase} = 55 - 40 = 15 \text{ cm}$$

$$\text{Fraction of original height} = \frac{15}{40}$$

Divide top and bottom by 5

$$\frac{15}{40} = \frac{3}{8}$$

$$\boxed{\frac{3}{8}}$$

14 Freya has 45 marbles.

She gives 9 marbles to her brother.

She then loses 6 marbles.

Work out the fraction of her marbles that Freya has left. Give your fraction in its simplest form.

(3 marks)

$$\text{Marbles left} = 45 - 9 - 6 = 30$$

$$\text{Fraction left} = \frac{30}{45}$$

Divide top and bottom by 15

$$\frac{30}{45} = \frac{2}{3}$$

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