

class -
subject :- Math.
chapter = Fractions.

Fraction means = $\frac{\text{Numerator}}{\text{Denominator}}$.

Types of fraction

- ① proper fraction are less than 1.
That is; the numerator is always less than the denominator.

For example $\frac{3}{4}$; $\frac{1}{2}$ etc.

- ② Improper fraction are greater than 1. That is the numerator is always greater than the denominator.

For example :- $\frac{5}{2}$; $\frac{8}{3}$ etc.

- ③ Improper fractions can be written as mixed fractions or mixed numbers.
For example. $2\frac{1}{2}$; $2\frac{2}{3}$ etc.

(4) unit-fractions are proper fractions with the numerator 1.
 For example, $\frac{1}{2}$; $\frac{1}{3}$ etc.

(5) Like fractions have the same denominator.

example. $\frac{2}{5}$; $\frac{3}{5}$; $\frac{7}{5}$; $\frac{4}{5}$ etc.

(6) Unlike fractions have different denominators.

Example: $\frac{1}{3}$; $\frac{2}{7}$ etc.

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A. Complete these tables of equivalent fractions:-

1.	$\frac{1}{2}$	$\frac{1}{2} \times \frac{2}{2} = \frac{2}{4}$	$\frac{1 \times 3}{2 \times 3} = \frac{3}{6}$	$\frac{1}{2} \times \frac{4}{4} = \frac{4}{8}$	$\frac{1 \times 5}{2 \times 5} = \frac{5}{10}$
	$\frac{1}{3}$	$\frac{1 \times 2}{3 \times 2} = \frac{2}{6}$	$\frac{1 \times 3}{3 \times 3} = \frac{3}{9}$	$\frac{1 \times 4}{3 \times 4} = \frac{4}{12}$	$\frac{1 \times 5}{3 \times 5} = \frac{5}{15}$
	$\frac{2}{3}$	$\frac{2 \times 2}{3 \times 2} = \frac{4}{6}$	$\frac{2 \times 3}{3 \times 3} = \frac{6}{9}$	$\frac{2 \times 4}{3 \times 4} = \frac{8}{12}$	$\frac{2 \times 5}{3 \times 5} = \frac{10}{15}$
	$\frac{2}{5}$	$\frac{2 \times 2}{5 \times 2} = \frac{4}{10}$	$\frac{2 \times 3}{5 \times 3} = \frac{6}{15}$	$\frac{2 \times 4}{5 \times 4} = \frac{8}{20}$	$\frac{2 \times 6}{5 \times 6} = \frac{12}{30}$

H/w

Table B

B. Fill in the boxes to make equivalent fractions.

1. $\frac{1}{4} = \frac{\boxed{2}}{8}$

Rough

$\frac{1}{4} = \frac{\boxed{x}}{8}$ (let $x = ?$)

$\Rightarrow 4x = 1 \times 8$ [cross multiply]

$\Rightarrow x = \frac{8}{4}$

$\therefore x = 2$

6. $\frac{1}{6} = \frac{5}{\boxed{30}}$

Rough

$\frac{1}{6} = \frac{5}{\boxed{x}}$

$\Rightarrow 1 \times x = 6 \times 5$ [cross multiply]

$\Rightarrow x = 30$

H/w B. (1 to 9)

C. Complete the following.

$$1. \quad \frac{2}{3} = \frac{\boxed{4}}{6} = \frac{6}{\boxed{9}} = \frac{8}{\boxed{12}} = \frac{\boxed{10}}{15}$$

Rough

$$\frac{2}{3} = \frac{\square}{6}$$

$$\Rightarrow \frac{2}{3} = \frac{x}{6}$$

$$\Rightarrow 3x = 2 \times 6$$

$$\Rightarrow x = \frac{2 \times 6}{3}$$

$$\therefore x = 4$$

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

$$\Rightarrow \frac{2}{3} = \frac{8}{b}$$

$$\Rightarrow 2b = 3 \times 8$$

$$\Rightarrow b = \frac{3 \times 8}{2}$$

$$\frac{2}{3} = \frac{6}{\square}$$

$$\Rightarrow \frac{2}{3} = \frac{6}{a}$$

$$\Rightarrow 2a = 3 \times 6$$

$$\Rightarrow a = \frac{3 \times 6}{2}$$

$$\therefore a = 9$$

$$\frac{2}{3} = \frac{\square}{15}$$

$$\Rightarrow \frac{2}{3} = \frac{d}{15}$$

$$\Rightarrow 3d = 2 \times 15$$

$$\therefore d = \frac{2 \times 15}{3}$$

$$d = 10$$

C. H/w (2)

∞. write an equivalent fraction in lower terms.

1. $\frac{3}{12}$

$$= \frac{3 \div 3}{12 \div 3} = \frac{1}{4} \text{ Ans.}$$

6. $\frac{12}{24}$

$$= \frac{12 \div 2}{24 \div 2} = \frac{6}{12}$$

$$= \frac{6 \div 2}{12 \div 2} = \frac{3}{6}$$

$$= \frac{3 \div 3}{6 \div 3} = \frac{1}{2} \text{ Ans.}$$

H/w ∞ (1 to 6).

E. Find the equivalent fraction of $\frac{3}{5}$ with the denominator 20.

$$\frac{3 \times 4}{5 \times 4} = \frac{12}{20} //$$

3. denominator 25.

$$\frac{3 \times 5}{5 \times 5} = \frac{15}{25} //$$

Hfw Ex = 4.1 (all)