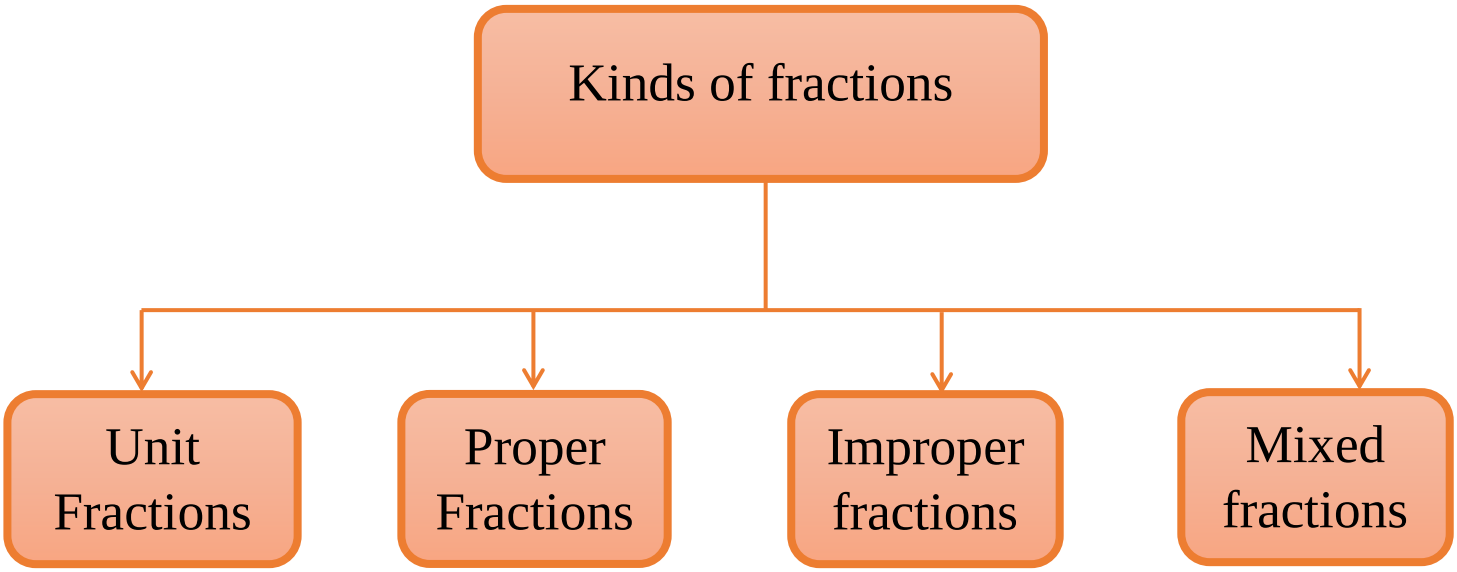
Kinds of Fractions

There are mainly 4 types of fractions. They are :-



1) Unit Fractions:-

The fractions which have 1 as the numerator are called unit fractions.

For example:- $\frac{1}{5}$, $\frac{1}{10}$, $\frac{1}{20}$ are all unit fractions.

2) Proper Fractions:-

A fraction in which the numerator is less than the denominator is called a proper fraction.

For example:- $\frac{2}{5}$, $\frac{3}{7}$, $\frac{7}{10}$ are all proper fractions.

3) Improper Fractions:-

A fraction in which the numerator is greater or equal to the denominator are called improper fraction.

For example:- $\frac{5}{4}$, $\frac{7}{3}$, $\frac{10}{7}$, $\frac{6}{6}$ are improper fractions.

4) Mixed Fractions:-

A mixed number is a mixture of a whole number and a proper fraction.

For example:- $3\frac{1}{4}$, $2\frac{6}{8}$ are mixed fractions.

Do this quick assessment in book

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Quick Assessment

Give each of the following fractions one of these names given below.
Write P for proper, I for improper and M for mixed fraction.

1. $\frac{6}{11}$ P 2. $7\frac{1}{3}$ M 3. $\frac{15}{14}$ I 4. $\frac{8}{8}$ I

Do Exercise- Self Practice 7F in classwork copy.

Self Practice 7F

1. Which of the following are unit fractions?

(a) $\frac{1}{3}$ (b) $\frac{3}{4}$ (c) $\frac{1}{23}$ (d) $\frac{1}{29}$ (e) $\frac{17}{117}$

Solution 1:- (a) $\frac{1}{5}$ = Yes (b) $\frac{3}{7}$ = No (c) $\frac{1}{5}$ = Yes

In Q1. (d) and (e) are homework

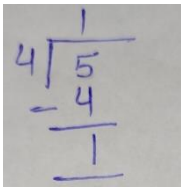
2. Change each of the following fractions into a mixed number.

(a) $\frac{5}{4}$ (b) $\frac{11}{5}$ (c) $\frac{23}{6}$ (d) $\frac{113}{18}$ (e) $\frac{101}{11}$

Solution 2:- (a) $\frac{5}{4}$

Mixed number = Quotient $\frac{Remainder}{Divisor}$

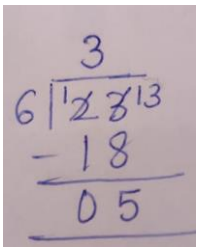
$= 1\frac{1}{4}$



(c) $\frac{23}{6}$

Mixed number = Quotient $\frac{Remainder}{Divisor}$

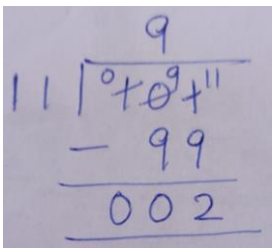
$= 3\frac{5}{6}$



(e) $\frac{101}{11}$

Mixed number = Quotient $\frac{Remainder}{Divisor}$

$= 9\frac{2}{11}$



In Q2. (b) and (d) are homework

3. **Convert each of the following mixed numbers into an improper fraction.**

(a) $2\frac{1}{3}$ (b) $5\frac{1}{6}$ (c) $17\frac{2}{3}$ (d) $23\frac{3}{4}$ (e) $16\frac{5}{8}$

Solution 3:- (a) $2\frac{1}{3}$

Improper Fraction = $\frac{Denominator \times Whole\ number + Numerator}{Denominator}$

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

$= \frac{6+1}{3}$

$= \frac{7}{3}$

(c) $17\ \frac{2}{3}$

Improper Fraction $= \frac{Denominator \times Whole\ number + Numerator}{Denominator}$

$$= \frac{3 \times 17 + 2}{3}$$

$$= \frac{51 + 2}{3}$$

$$= \frac{53}{3}$$

(e) $16\ \frac{5}{8}$

Improper Fraction $= \frac{Denominator \times Whole\ number + Numerator}{Denominator}$

$$= \frac{8 \times 16 + 5}{8}$$

$$= \frac{128 + 5}{8}$$

$$= \frac{133}{8}$$

In Q3. (b) and (d) are homework.

Q4. is omitted (will not come in the exam)