

ASSIGNMENT - II

CHAPTER - II

Fraction and Decimals

What is fraction ?

The numbers in the form of $\frac{a}{b}$, where 'a' and 'b' are natural no. are known as fractions. a is called numerator, b = deno.

Types of fractions.

- (a) Proper Fraction - A fraction, whose numerator is less than its denominator is called a proper fraction. such as $\frac{5}{6}$, $\frac{11}{13}$ etc.
- (b) Improper fraction :- A fraction, whose numerator is more than or equal to its denominator are called Improper fractions. Such as $\frac{13}{7}$, $\frac{19}{17}$ etc.
- (c) mixed fraction. A number which can be expressed as the sum of a natural number and proper fraction is called mixed fraction. Such as $3\frac{2}{5}$, $6\frac{2}{7}$ etc.
- (d) Decimal fraction - A fraction whose denominator is in the form of 10 or 100 or 1000, or 10000 etc. are called decimal fraction. Such as $\frac{3}{10}$, $\frac{5}{1000}$ etc.
- (e) Vulgar fractions: A fraction whose denominator are natural number other 10, 100, 1000 etc are called vulgar fraction. Such as $\frac{13}{25}$, $\frac{125}{129}$ etc.
- (f) Equivalent fractions - when we multiply or divide num. & deno. of a fraction by same non-zero number then obtained fraction is equivalent fraction. Such as $\frac{3}{5} = \frac{3 \times 2}{5 \times 2} = \frac{3 \times 3}{5 \times 3} = \frac{6}{10} = \frac{9}{15}$.

1) Like fractions :- fractions, whose denominator are same but numerators are different, are called like fraction such as - $\frac{3}{11}$, $\frac{4}{11}$, $\frac{5}{11}$, $\frac{9}{11}$ etc.

2) Unlike fractions :- fractions, whose denominators are different, are called unlike fractions such as - $\frac{7}{11}$, $\frac{5}{13}$, $\frac{9}{13}$ etc.

1) Example :- Convert the fraction into lowest form.
such as = $\frac{40}{125}$ - HCF of 40 and 125 is 5. So divide the numerator and denominator by 5.

$$\text{we get } \frac{40 \div 5}{125 \div 5} = \frac{8}{25}$$

2) Example - Compare the fraction.

(a) $\frac{5}{8}$ and $\frac{4}{7}$.

By cross-multiplication we have $5 \times 7 = 35$, $8 \times 4 = 32$

$$\frac{5}{8} > \frac{4}{7}$$

EXERCISE 2.1



1. Convert the following fractions into lowest form :

(a) $\frac{85}{105}$

(b) $\frac{-48}{144}$

(c) $\frac{35}{120}$

(d) $\frac{60}{96}$

(e) $\frac{142}{180}$

(f) $\frac{75}{220}$

(g) $\frac{-45}{150}$

(h) $\frac{65}{117}$

2. Compare the fractions :

(a) $\frac{5}{8}$ and $\frac{4}{7}$

(b) $\frac{4}{9}$ and $\frac{6}{13}$

(c) $\frac{-6}{13}$ and $\frac{-4}{13}$

(d) $\frac{5}{16}$ and $\frac{3}{8}$

(e) $\frac{-4}{19}$ and $\frac{-3}{17}$

(f) $\frac{11}{12}$ and $\frac{14}{16}$

3. Arrange the following fractions in the ascending order :

(a) $\frac{2}{3}, \frac{5}{6}, \frac{7}{18}, \frac{1}{24}$

(b) $\frac{3}{4}, \frac{7}{8}, \frac{17}{32}, \frac{7}{16}$

(c) $\frac{3}{5}, \frac{3}{10}, \frac{9}{14}, \frac{14}{35}$

(d) $\frac{7}{18}, \frac{5}{12}, \frac{19}{21}, \frac{25}{36}$

4. Arrange the following fractions in the descending order :

(a) $\frac{11}{12}, \frac{5}{9}, \frac{3}{4}, \frac{1}{6}$

(b) $\frac{3}{25}, \frac{1}{5}, \frac{7}{20}, \frac{4}{15}$

(c) $\frac{7}{18}, \frac{5}{12}, \frac{6}{24}, \frac{3}{10}$

(d) $\frac{5}{14}, \frac{3}{7}, \frac{13}{28}, \frac{10}{35}$

5. Simplify :

(a) $3\frac{1}{4} - 2\frac{2}{5} + 1\frac{1}{10}$

(b) $7\frac{5}{6} - 4\frac{3}{8} + 1\frac{5}{12}$

(c) $4\frac{1}{3} + 2\frac{5}{12} - 5\frac{1}{6}$

(d) $5 - 3\frac{1}{7} + 2\frac{3}{14}$

(e) $3\frac{1}{5} + 2\frac{1}{10} - 1\frac{1}{2} - \frac{1}{4}$

(f) $6\frac{1}{10} - 3\frac{2}{5} - 2\frac{1}{6} + 3$