

Fraction

Types of fraction: There are 3 types of fraction 1) Proper 2) Improper 3) Mixed Fraction or Mixed number.

Proper Fraction: If the numerator is smaller than denominator then such fraction is called Proper fraction. E.g. $\frac{4}{9}$, $\frac{5}{7}$, $\frac{3}{5}$...

Improper Fraction: If the numerator is greater than denominator then such fraction is called Improper fraction. Improper fraction can be converted into mixed fraction. E.g. $\frac{22}{7}$, $\frac{11}{6}$, $\frac{7}{3}$...

Mixed fraction: The combined form of the whole number and the proper fraction is called mixed fraction. Mixed fraction can be converted into Improper fraction. E.g. $8\frac{7}{8}$, $2\frac{1}{6}$, $3\frac{5}{6}$

Equivalent Fraction: Fraction having the same value or all fractions when simplified, we get the same simplest form of the fraction. E.g. equivalent Fraction of $\frac{3}{5}$ are $\frac{3}{5} = \frac{6}{10} = \frac{9}{15} = \frac{12}{20} = \frac{15}{25} = \frac{18}{30}$

Comparison of the fractions. If the denominators are same then the fraction with smaller numerator is smaller. If the numerators are same then the fraction with greater denominator is the smaller. If neither of same then we have to make same denominator and then we have to compare.

Exercise: 3

1) Write the type of the following fractions.

a) $\frac{22}{7}$ improper

b) $2\frac{1}{6}$ mixed

c) $\frac{7}{3}$ improper

d) $3\frac{5}{6}$ mixed

e) $\frac{2}{7}$ proper

f) $\frac{14}{9}$ improper

g) $\frac{5}{7}$ proper

h) $9\frac{3}{5}$ mixed

i) $\frac{12}{11}$ improper

2) Convert the following mixed fractions into improper.

a) $8\frac{7}{8}$ _____

b) $2\frac{1}{6}$ _____

c) $8\frac{5}{6}$ _____

d) $7\frac{3}{5}$ _____

e) $12\frac{2}{3}$ _____

f) $7\frac{7}{9}$ _____

3) Convert the following improper fraction into mixed.

a) $\frac{73}{8}$ _____

b) $\frac{17}{6}$ _____

c) $\frac{47}{6}$ _____

d) $\frac{37}{5}$ _____

e) $\frac{78}{3}$ _____

f) $\frac{39}{7}$ _____

4) Write next 5 equivalent fractions of the given fractions.

a) $\frac{3}{7} =$ _____

b) $\frac{1}{4} =$ _____

c) $\frac{2}{7} =$ _____

d) $\frac{5}{8} =$ _____

e) $\frac{3}{4} =$ _____

5) Compare the following fractions. Using < or > signs

a) $\frac{22}{31}$ and $\frac{27}{31}$

b) $\frac{1}{6}$ and $\frac{1}{8}$

c) $\frac{7}{3}$ and $\frac{1}{3}$

d) $\frac{5}{6}$ and $\frac{3}{5}$

e) $\frac{2}{7}$ and $\frac{5}{7}$

f) $\frac{4}{9}$ and $\frac{4}{7}$

Addition and Subtraction of fractions.

Step 1: Check whether the fractions have same denominator or not.

Step 2: If not then make same denominator using equivalent fraction.

Step 3: Do add or subtract the numerators and the denominators remains the same.

Make the denominator of the following fraction as 36.

1) $\frac{7}{9}$ $\frac{2 \cdot 2}{36}$

2) $\frac{1}{2}$

3) $\frac{2}{3}$

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

5) $\frac{3}{4}$

6) $\frac{7}{12}$

Add the following fractions.	Subtract these fractions.
6) $\frac{3}{8} + \frac{1}{4} =$ _____	11) $\frac{3}{8} - \frac{1}{3} =$ _____
7) $\frac{1}{5} + \frac{2}{15} =$ _____	12) $\frac{5}{14} - \frac{3}{7} =$ _____
8) $\frac{5}{7} + \frac{1}{2} =$ _____	13) $\frac{5}{7} - \frac{1}{2} =$ _____
9) $\frac{5}{6} + \frac{1}{2} =$ _____	14) $\frac{5}{6} - \frac{1}{2} =$ _____
10) $\frac{3}{4} + \frac{1}{6} =$ _____	15) $\frac{1}{3} - \frac{1}{6} =$ _____