



**MONTH : SEPTEMBER**

**SESSION : 2**

**CLASS : V**

**SUBJECT : MATHEMATICS**

**CHAPTER NUMBER : 9**

**CHAPTER NAME : FRACTION**

**SUB-TOPIC : ADDITION AND SUBTRACTION OF FRACTIONS**

**EXERCISE 9 B Q.NO. 1 AND 2**

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**CHANGING YOUR TOMORROW**

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## **LEARNING OBJECTIVE :**

**Enable the students**

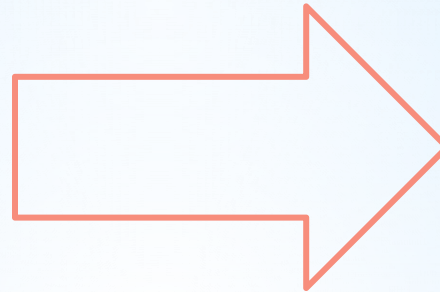
- **To add unlike fractions and mixed numbers.**
- **To subtract unlike fractions and mixed numbers.**



# Adding and Subtracting Fractions

**Method:**

**Find the L.C.M.  
of the  
Denominators**



**Change the  
fractions to  
their  
equivalent  
fractions with  
common  
denominator**

**Then add or  
subtract.**



# Adding and Subtracting Fractions

Example: 1

$$\frac{5}{6} + \frac{7}{12}$$
$$= \frac{5 \times 2 + 7 \times 1}{12} = \frac{10 + 7}{12} = \frac{17}{12}$$

OR

3	6, 12
2	2, 4
	1, 2

L.C.M. = 12

$$\frac{5}{6} + \frac{7}{12}$$

L.C.M. = 12

$$\frac{5}{6} = \frac{10}{12} \begin{array}{|c|} \hline \times 2 \\ \hline \times 2 \\ \hline \end{array}$$

$$\frac{10}{12} + \frac{7}{12} = \frac{17}{12}$$

$$\frac{7}{12} = \frac{7}{12}$$



# Adding and Subtracting Fractions

Example: 2

$$\frac{8}{15} - \frac{4}{9}$$

$$= \frac{8 \times 3 - 4 \times 5}{45}$$

$$= \frac{24 - 20}{45}$$

$$= \frac{4}{45}$$

3	9, 15
3	3, 5
	1, 5

L.C.M. = 45



# EXERCISE 9 B

## 1. Add

a.  $\frac{5}{6} + \frac{7}{12}$

$$\frac{5 \times 2 + 7 \times 1}{12} = \frac{10 + 7}{12} = \frac{17}{12}$$

b.  $\frac{4}{5} + \frac{3}{10} + \frac{1}{2}$

$$\frac{4 \times 2 + 3 \times 1 + 1 \times 5}{10}$$

$$= \frac{8 + 3 + 5}{10} = \frac{16}{10}$$

3	6, 12
2	2, 4
	1, 2

L.C.M. = 12

2	5, 10, 2
5	5, 5, 1
	1, 1, 1

L.C.M. = 10



## EXERCISE 9 B

$$c. \quad \frac{5}{6} + \frac{7}{12} + \frac{5}{24}$$

$$\frac{5 \times 4 + 7 \times 2 + 5 \times 1}{24}$$

$$= \frac{20 + 14 + 5}{24} = \frac{39}{24}$$

2	6, 12, 24
3	3, 6, 12
2	1, 2, 4
	1, 1, 2

**L.C.M. = 24**



## EXERCISE 9 B

$$d. \quad \frac{2}{7} + \frac{3}{5} + \frac{1}{2}$$

$$\frac{2 \times 10 + 3 \times 14 + 1 \times 35}{70}$$

$$= \frac{20 + 42 + 35}{70} = \frac{97}{70}$$

L.C.M. =  $2 \times 5 \times 7 = 70$   
As 2, 5 and 7 are  
prime numbers.





## EXERCISE 9 B

$$e. \quad \frac{5}{16} + \frac{7}{10} + \frac{2}{5}$$

$$\frac{5 \times 5 + 7 \times 8 + 2 \times 16}{80}$$

$$= \frac{25 + 56 + 32}{80} = \frac{113}{80}$$

2	16, 10, 5
5	8, 5, 5
2	8, 1, 1
2	4, 1, 1
	2, 1, 1

L.C.M. = 80



## EXERCISE 9 B

$$g. \quad 1 \frac{1}{4} + 3 \frac{3}{8} = \frac{5}{4} + \frac{27}{8}$$

$$\frac{5 \times 2 + 27 \times 1}{8}$$

$$= \frac{10 + 27}{8} = \frac{37}{8} = 4 \frac{5}{8}$$

2	4, 8
2	2, 4
	1, 2

L.C.M. = 8



## EXERCISE 9 B

### 2. Subtract

$$\text{a. } \frac{8}{15} - \frac{4}{9}$$

$$= \frac{8 \times 3 - 4 \times 5}{45} = \frac{24 - 20}{45} = \frac{4}{45}$$

$$\text{b. } \frac{11}{13} - \frac{5}{7}$$

$$\frac{11 \times 7 - 5 \times 13}{91}$$

$$= \frac{77 - 65}{91} = \frac{12}{91}$$

3	9, 15
3	3, 5
	1, 5

L.C.M. = 45

L.C.M. =  $13 \times 7 = 91$   
As 11, 7 are prime numbers.



## EXERCISE 9 B

$$c. \quad \frac{13}{17} - \frac{7}{10}$$

$$\text{L.C.M.} = 17 \times 10 = 170$$

$$\frac{13 \times 10 - 7 \times 17}{170}$$

$$= \frac{130 - 119}{170} = \frac{11}{170}$$



## EXERCISE 9 B

$$d. \quad \frac{15}{19} - \frac{9}{13}$$

$$\frac{15 \times 13 - 9 \times 19}{247}$$

$$= \frac{195 - 171}{247} = \frac{24}{247}$$

$$\text{L.C.M.} = 19 \times 13 = 247$$



## EXERCISE 9 B

$$e. \quad \frac{7}{9} - \frac{4}{15}$$

$$\frac{7 \times 5}{45} - \frac{4 \times 3}{45}$$

$$= \frac{35 - 12}{45} = \frac{23}{45}$$

3	9, 15
3	3, 5
	1, 5

L.C.M. = 45



## EXERCISE 9 B

$$f. \quad \frac{16}{27} - \frac{7}{18}$$

$$\frac{16 \times 2 \quad - \quad 7 \times 3}{54}$$

$$= \frac{32 - 21}{54} = \frac{11}{54}$$

3	18, 27
3	6, 9
3	2, 3
2	2, 1
	1, 1

**L.C.M. = 54**



## EXERCISE 9 B

$$g. \quad 13\frac{7}{9} - 8\frac{5}{12} = \frac{124}{9} - \frac{101}{12}$$

$$\frac{124 \times 4 - 101 \times 3}{36}$$

$$= \frac{496 - 303}{36} = \frac{193}{36} = 5\frac{13}{36}$$

3	9, 12
2	3, 4
2	3, 2
3	3, 1
	1, 1

L.C.M. = 36





- **Complete exercise 9 B Q.No.1 and 2 in the notebook.**

**THANKING YOU**  
**ODM EDUCATIONAL GROUP**