



Exercise 4C

The denominators of the given rational numbers are 9 and 3.

$$\begin{array}{r|l} 3 & 9,3 \\ \hline 3 & 3,1 \\ \hline & 1,1 \end{array}$$

L.C.M. of 9 and 3 is 9.

$$\frac{-5}{9} = \frac{(-5) \times 1}{9 \times 1} = \frac{-5}{9}$$

$$\frac{2}{3} = \frac{2 \times 3}{3 \times 3} = \frac{6}{9}$$

$$\begin{aligned} \text{Now, } & \frac{(-5)}{9} + \frac{6}{9} \\ &= \frac{-5+6}{9} \\ &= \frac{1}{9} \end{aligned}$$

$$\text{(iii)} -4 + \frac{1}{2}$$

The denominators of the given rational numbers are 1 and 2.

L.C.M. of 1 and 2 is 2.

$$\frac{-4}{1} = \frac{(-4) \times 2}{1 \times 2} = \frac{-8}{2}$$

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

$$\begin{aligned} \text{Now, } & \frac{(-8)}{2} + \frac{1}{2} \\ &= \frac{-8+1}{2} \\ &= \frac{-7}{2} \end{aligned}$$

(iv)

$$\frac{-7}{27} + \frac{5}{18}$$

The denominators of the given rational numbers are 27 and 18.

$$\begin{array}{r|l} 3 & 27, 18 \\ \hline 3 & 9, 6 \\ \hline 3 & 3, 2 \\ \hline 2 & 1, 2 \\ \hline & 1, 1 \end{array}$$

L.C.M. of 27 and 18 is 54.

$$\frac{-7}{27} = \frac{(-7) \times 2}{27 \times 2} = \frac{-14}{54}$$
$$\frac{5}{18} = \frac{5 \times 3}{18 \times 3} = \frac{15}{54}$$

$$\text{Now, } \frac{(-14)}{54} + \frac{15}{54} = \frac{-14+15}{54}$$
$$= \frac{1}{54}$$

$$(v) \frac{-5}{36} + \left(\frac{-7}{12} \right)$$

$$\begin{array}{r|l} 3 & 36, 12 \\ \hline 2 & 12, 4 \\ \hline 2 & 6, 2 \\ \hline 3 & 3, 1 \\ \hline & 1, 1 \end{array}$$

The denominators of the given rational numbers are 36 and 12.

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