

Rational Numbers Ex 1.1 Q4

Answer:

(i)

We have $\frac{-12}{5} + \frac{43}{10}$.

L.C.M. of the denominators 5 and 10 is 10.

Now, we will express $\frac{-12}{5}$ in the form in which it takes the denominator 10.

$$\frac{-12 \times 2}{5 \times 2} = \frac{-24}{10}$$

$$\therefore \frac{-12}{5} + \frac{43}{10} = \frac{-24}{10} + \frac{43}{10}$$

$$= \frac{-24 + 43}{10}$$

$$= \frac{19}{10}$$

$$= 1 \frac{9}{10}$$

(ii)

We have $\frac{24}{7} + \frac{-11}{4}$. L.C.M. of the denominators 7 and 4 is 28.

Now, we will express $\frac{24}{7}$ and $\frac{-11}{4}$ in the form in which they take the denominator 28.

$$\begin{aligned} &\frac{24\times4}{7\times4} = \frac{96}{28} \\ &\frac{-11\times7}{4\times7} = \frac{-77}{28} \\ &\therefore \frac{24}{7} + \frac{-11}{4} = \frac{96}{28} + \frac{-77}{28} \\ &= \frac{96-77}{28} \\ &= \frac{19}{28} \end{aligned}$$

$$&\text{(iii)}$$

We have $\frac{-31}{6} + \frac{-27}{8}$. L.C.M. of the denominators 6 and 8 is 24. Now, we will express $\frac{-31}{6}$ and $\frac{-27}{8}$ in the form in which they take the denominator 24.

Now, we will express
$$\frac{-31 \times 4}{6 \times 4} = \frac{-124}{24}$$

 $\frac{-27 \times 3}{8 \times 3} = \frac{-81}{24}$
 $\therefore \frac{-31}{6} + \frac{-27}{8} = \frac{-124}{24} + \frac{-81}{24}$
 $= \frac{-124 - 81}{24}$
 $= \frac{-205}{24}$
 $= -8 \frac{13}{24}$

(iv)

We have $\frac{101}{6} + \frac{7}{8}$.

L.C.M. of the denominators 6 and 8 is 24.

Now, we will express $\frac{101}{6}$ and $\frac{7}{8}$ in the form in which they take the denominator 24.

$$\frac{101 \times 4}{6 \times 4} = \frac{404}{24}$$

$$\frac{7 \times 3}{8 \times 3} = \frac{21}{24}$$

$$\therefore \frac{101}{6} + \frac{7}{8} = \frac{404}{24} + \frac{21}{24}$$

$$= \frac{404 + 21}{24}$$

$$= \frac{425}{24}$$

$$= 17 \frac{17}{24}$$

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