



Rational Numbers Ex 1.5 Q5

Answer :

$$\begin{aligned} \text{(i)} \quad & \left(\frac{3}{2} \times \frac{1}{6} \right) + \left(\frac{5}{3} \times \frac{7}{2} \right) - \left(\frac{13}{8} \times \frac{4}{3} \right) \\ &= \frac{1}{4} + \frac{35}{6} - \frac{13}{6} \\ &= \frac{1 \times 3 + 35 \times 2 - 13 \times 2}{12} \\ &= \frac{3 + 70 - 26}{12} \\ &= \frac{47}{12} \end{aligned}$$

$$\begin{aligned} \text{(ii)} \quad & \left(\frac{1}{4} \times \frac{2}{7} \right) - \left(\frac{5}{14} \times \frac{-2}{3} \right) + \left(\frac{3}{7} \times \frac{9}{2} \right) \\ &= \frac{1}{14} - \frac{-5}{21} + \frac{27}{14} \\ &= \frac{1 \times 3 + 5 \times 2 + 27 \times 3}{42} \\ &= \frac{94}{42} = \frac{47}{21} \end{aligned}$$

$$\begin{aligned} \text{(iii)} \quad & \left(\frac{13}{9} \times \frac{-15}{2} \right) + \left(\frac{7}{3} \times \frac{8}{5} \right) + \left(\frac{3}{5} \times \frac{1}{2} \right) \\ &= \frac{-13 \times 5}{6} + \frac{7 \times 8}{15} + \frac{3}{10} \\ &= \frac{-65}{6} + \frac{56}{15} + \frac{3}{10} \\ &= \frac{-65 \times 5 + 56 \times 2 + 3 \times 3}{30} \\ &= \frac{-204}{30} = \frac{-34}{5} \end{aligned}$$

$$\begin{aligned} \text{(iv)} \quad & \left(\frac{3}{11} \times \frac{5}{6} \right) - \left(\frac{9}{12} \times \frac{4}{3} \right) + \left(\frac{5}{13} \times \frac{6}{15} \right) \\ &= \frac{5}{22} - 1 + \frac{2}{13} \\ &= \frac{5 \times 13 - 286 + 2 \times 22}{286} \\ &= \frac{65 - 286 + 44}{286} \\ &= \frac{-177}{286} \end{aligned}$$

***** END *****

