



Exercise 6A

Q12

Answer :

Given expression:

$$\begin{aligned}
 &= 4\frac{1}{10} - \left[2\frac{1}{2} - \left\{ \frac{5}{6} - \left(\frac{2}{5} + \frac{3}{10} - \frac{4}{15} \right) \right\} \right] \\
 &= \frac{41}{10} - \left[\frac{5}{2} - \left\{ \frac{5}{6} - \left(\frac{2}{5} + \frac{3}{10} - \frac{4}{15} \right) \right\} \right] \\
 &= \frac{41}{10} - \left[\frac{5}{2} - \left\{ \frac{5}{6} - \left(\frac{12+9-8}{30} \right) \right\} \right] \\
 &= \frac{41}{10} - \left[\frac{5}{2} - \left\{ \frac{5}{6} - \frac{13}{30} \right\} \right] \\
 &= \frac{41}{10} - \left[\frac{5}{2} - \left\{ \frac{25-13}{30} \right\} \right] \\
 &= \frac{41}{10} - \left[\frac{5}{2} - \frac{12}{30} \right] \\
 &= \frac{41}{10} - \left[\frac{75-12}{30} \right] \\
 &= \frac{41}{10} - \frac{63}{30} \\
 &= \frac{123-63}{30} = \frac{60}{30} = 2
 \end{aligned}$$

(Removing parentheses)

(Removing braces)

(Removing square brackets)

Q13

Answer :

Given expression:

$$\begin{aligned}
 &= 1\frac{5}{6} + \left[2\frac{2}{3} - \left\{ 3\frac{3}{4} \left(3\frac{4}{5} \div 9\frac{1}{2} \right) \right\} \right] \\
 &= \frac{11}{6} + \left[\frac{8}{3} - \left\{ \frac{15}{4} \left(\frac{19}{5} \div \frac{19}{2} \right) \right\} \right] \\
 &= \frac{11}{6} + \left[\frac{8}{3} - \left\{ \frac{15}{4} \left(\frac{19}{5} \times \frac{2}{19} \right) \right\} \right] \\
 &= \frac{11}{6} + \left[\frac{8}{3} - \left\{ \frac{15}{4} \times \frac{2}{5} \right\} \right] \\
 &= \frac{11}{6} + \left[\frac{8}{3} - \frac{3}{2} \right] \\
 &= \frac{11}{6} + \left[\frac{16-9}{6} \right] \\
 &= \frac{11}{6} + \frac{7}{6} \\
 &= \frac{18}{6} = 3
 \end{aligned}$$

(Removing parentheses)

(Removing braces)

(Removing square brackets)

Q14

Answer :

Given expression:

$$\begin{aligned}
 &= 4\frac{4}{5} \div \left\{ 2\frac{1}{5} - \frac{1}{2} \left(1\frac{1}{4} - \overline{\frac{1}{4} - \frac{1}{5}} \right) \right\} \\
 &= \frac{24}{5} \div \left\{ \frac{11}{5} - \frac{1}{2} \left(\frac{5}{4} - \overline{\frac{1}{4} - \frac{1}{5}} \right) \right\} \\
 &= \frac{24}{5} \div \left\{ \frac{11}{5} - \frac{1}{2} \left(\frac{5}{4} - \frac{1}{20} \right) \right\} \\
 &= \frac{24}{5} \div \left\{ \frac{11}{5} - \frac{1}{2} \left(\frac{25-1}{20} \right) \right\} \\
 &= \frac{24}{5} \div \left\{ \frac{11}{5} - \frac{1}{2} \times \frac{24}{20} \right\} \\
 &= \frac{24}{5} \div \left\{ \frac{11}{5} - \frac{12}{20} \right\} \\
 &= \frac{24}{5} \div \left\{ \frac{44-12}{20} \right\} \\
 &= \frac{24}{5} \div \frac{32}{20} \\
 &= \frac{24}{5} \times \frac{20}{32} \\
 &= \frac{3}{4} \times 4 = 3
 \end{aligned}$$

(Removing bar)

(Removing parentheses)

(Removing ' × ')

(Removing braces)

(Removing ' ÷ ')

Q15

Answer :

Given expression:

$$\begin{aligned} &= 7\frac{1}{2} - \left[2\frac{1}{4} \div \left\{ 1\frac{1}{4} - \frac{1}{2} \left(\frac{3}{2} - \overline{\overline{\frac{1}{3} - \frac{1}{6}}} \right) \right\} \right] \\ &= \frac{15}{2} - \left[\frac{9}{4} \div \left\{ \frac{5}{4} - \frac{1}{2} \left(\frac{3}{2} - \overline{\overline{\frac{1}{3} - \frac{1}{6}}} \right) \right\} \right] \\ &= \frac{15}{2} - \left[\frac{9}{4} \div \left\{ \frac{5}{4} - \frac{1}{2} \left(\frac{3}{2} - \frac{1}{6} \right) \right\} \right] && \text{(Removing bar)} \\ &= \frac{15}{2} - \left[\frac{9}{4} \div \left\{ \frac{5}{4} - \frac{1}{2} \left(\frac{9-1}{6} \right) \right\} \right] \\ &= \frac{15}{2} - \left[\frac{9}{4} \div \left\{ \frac{5}{4} - \frac{1}{2} \times \frac{4}{3} \right\} \right] && \text{(Removing parentheses)} \\ &= \frac{15}{2} - \left[\frac{9}{4} \div \left\{ \frac{5}{4} - \frac{2}{3} \right\} \right] && \text{(Removing ' \times ')} \\ &= \frac{15}{2} - \left[\frac{9}{4} \div \left\{ \frac{15-8}{12} \right\} \right] && \text{(Removing braces)} \\ &= \frac{15}{2} - \left[\frac{9}{4} \div \frac{7}{12} \right] \\ &= \frac{15}{2} - \left[\frac{9}{4} \times \frac{12}{7} \right] && \text{(Removing ' \div ')} \\ &= \frac{15}{2} - \frac{27}{7} && \text{(Removing square brackets)} \\ &= \frac{105-54}{14} = \frac{51}{14} = 3\frac{9}{14} \end{aligned}$$

***** END *****