Exercise 6A

Q12

Answer :

Given expression:

$= 4\frac{1}{10} - \left[2\frac{1}{2} - \left\{\frac{5}{6} - \left(\frac{2}{5} + \frac{3}{10} - \frac{4}{15}\right)\right\}\right]$

$= \frac{41}{10} - \left[\frac{5}{2} - \left\{\frac{5}{6} - \left(\frac{2}{5} + \frac{3}{10} - \frac{4}{15}\right)\right\}\right]$

$= \frac{41}{10} - \left[\frac{5}{2} - \left\{\frac{5}{6} - \left(\frac{12+9-8}{30}\right)\right\}\right]$

$= \frac{41}{10} - \left[\frac{5}{2} - \left\{\frac{5}{6} - \frac{13}{30}\right\}\right]$ (Removing parentheses)

$= \frac{41}{10} - \left[\frac{5}{2} - \left\{\frac{25-13}{30}\right\}\right]$

$= \frac{41}{10} - \left[\frac{5}{2} - \frac{12}{30}\right]$ (Removing braces)

$= \frac{41}{10} - \left[\frac{75-12}{30}\right]$

$= \frac{41}{10} - \frac{63}{30}$ (Removing square brackets)

$= \frac{123-63}{30} = \frac{60}{30} = 2$

Q13

Answer :

Given expression:

$= 1\frac{5}{6} + \left[2\frac{2}{3} - \left\{3\frac{3}{4}\left(3\frac{4}{5} \div 9\frac{1}{2}\right)\right\}\right]$

$= \frac{11}{6} + \left[\frac{8}{3} - \left\{\frac{15}{4}\left(\frac{19}{5} \div \frac{19}{2}\right)\right\}\right]$

$= \frac{11}{6} + \left[\frac{8}{3} - \left\{\frac{15}{4}\left(\frac{19}{5} \times \frac{2}{19}\right)\right\}\right]$

$= \frac{11}{6} + \left[\frac{8}{3} - \left\{\frac{15}{4} \times \frac{2}{5}\right\}\right]$ (Removing parentheses)

$= \frac{11}{6} + \left[\frac{8}{3} - \frac{3}{2}\right]$ (Removing braces)

$= \frac{11}{6} + \left[\frac{16-9}{6}\right]$

$= \frac{11}{6} + \frac{7}{6}$ (Removing square brackets)

$= \frac{18}{6} = 3$

Q14

Answer :

Given expression:

$= 4\frac{4}{5} \div \left\{2\frac{1}{5} - \frac{1}{2}\left(1\frac{1}{4} - \overline{\frac{1}{4} - \frac{1}{5}}\right)\right\}$

$= \frac{24}{5} \div \left\{\frac{11}{5} - \frac{1}{2}\left(\frac{5}{4} - \overline{\frac{1}{4} - \frac{1}{5}}\right)\right\}$

$= \frac{24}{5} \div \left\{\frac{11}{5} - \frac{1}{2}\left(\frac{5}{4} - \frac{1}{20}\right)\right\}$ (Removing bar)

$= \frac{24}{5} \div \left\{\frac{11}{5} - \frac{1}{2}\left(\frac{25-1}{20}\right)\right\}$

$= \frac{24}{5} \div \left\{\frac{11}{5} - \frac{1}{2} \times \frac{24}{20}\right\}$ (Removing parentheses)

$= \frac{24}{5} \div \left\{\frac{11}{5} - \frac{12}{20}\right\}$ (Removing ' $\times$ ')

$= \frac{24}{5} \div \left\{\frac{44-12}{20}\right\}$

$= \frac{24}{5} \div \frac{32}{20}$ (Removing braces)

$= \frac{24}{5} \times \frac{20}{32}$ (Removing ' $\div$ ')

$= \frac{3}{4} \times 4 = 3$

Q15

Answer :

Given expression:

$$= 7\frac{1}{2} - \left[2\frac{1}{4} \div \left\{1\frac{1}{4} - \frac{1}{2}\left(\frac{3}{2} - \overline{\overline{\frac{1}{3}} - \frac{1}{6}}\right)\right\}\right]$$

$$= \frac{15}{2} - \left[\frac{9}{4} \div \left\{\frac{5}{4} - \frac{1}{2}\left(\frac{3}{2} - \overline{\overline{\frac{1}{3}} - \frac{1}{6}}\right)\right\}\right]$$

$$= \frac{15}{2} - \left[\frac{9}{4} \div \left\{\frac{5}{4} - \frac{1}{2}\left(\frac{3}{2} - \frac{1}{6}\right)\right\}\right] \quad \text{(Removing bar)}$$

$$= \frac{15}{2} - \left[\frac{9}{4} \div \left\{\frac{5}{4} - \frac{1}{2}\left(\frac{9-1}{6}\right)\right\}\right]$$

$$= \frac{15}{2} - \left[\frac{9}{4} \div \left\{\frac{5}{4} - \frac{1}{2} \times \frac{4}{3}\right\}\right] \quad \text{(Removing parentheses)}$$

$$= \frac{15}{2} - \left[\frac{9}{4} \div \left\{\frac{5}{4} - \frac{2}{3}\right\}\right] \quad \text{(Removing '} \times \text{')}$$

$$= \frac{15}{2} - \left[\frac{9}{4} \div \left\{\frac{15-8}{12}\right\}\right] \quad \text{(Removing braces)}$$

$$= \frac{15}{2} - \left[\frac{9}{4} \div \frac{7}{12}\right]$$

$$= \frac{15}{2} - \left[\frac{9}{4} \times \frac{12}{7}\right] \quad \left(\text{Removing '} \div \text{'}\right)$$

$$= \frac{15}{2} - \frac{27}{7} \quad \text{(Removing square brackets)}$$

$$= \frac{105-54}{14} = \frac{51}{14} = 3\frac{9}{14}$$

********** END **********