

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

$$=\frac{41}{10}-\left[\frac{63}{30}\right]$$
(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) $= \frac{18}{6} = 3$

014

Answer:

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

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

$$= \frac{24}{5} \div \left\{\frac{11}{5} - \frac{1}{2}\left(\frac{5}{4} - \frac{1}{20}\right)\right\}$$
(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 '×')
$$= \frac{24}{5} \div \left\{\frac{44-12}{20}\right\}$$

$$= \frac{24}{5} \div \frac{32}{20}$$
(Removing braces)
$$= \frac{24}{5} \times \frac{32}{32}$$
(Removing '÷')
$$= \frac{3}{4} \times 4 = 3$$

Answer:

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

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

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

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

$$= \frac{15}{2} - \left[\frac{9}{4} \div \left\{\frac{5}{4} - \frac{1}{2} \times \frac{4}{3}\right\}\right]$$

$$= \frac{15}{2} - \left[\frac{9}{4} \div \left\{\frac{5}{4} - \frac{2}{3}\right\}\right]$$

$$= \frac{15}{2} - \left[\frac{9}{4} \div \left\{\frac{15 - 8}{12}\right\}\right]$$

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

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

$$= \frac{15}{2} - \left[\frac{9}{4} \div \frac{1$$

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