Exercise 6A

Q1

Answer :

Given expression:

= 21 - 12 ÷ 3 × 2

= 21 - 4 × 2 [Performing division]

= 21 - 8 [Performing multiplication]

= 13 [Performing subtraction]

Q2

Answer :

Given expression:

= 16 + 8 ÷ 4 - 2 × 3

= 16 + 2 - 2 × 3 [Performing division]

= 16 + 2 - 6 [Performing multiplication]

= 18 - 6 [Performing addition]

= 12 [Performing subtraction]

Q3

Answer :

Given expression:

= 13 - (12 - 6 ÷ 3)

= 13 - (12 - 2) [Performing division]

= 13 - 10 = 3 [Performing subtraction]

Q4

Answer :

Given expression:

= 19 - [4 + {16 - (12 - 2)}]

= 19 - [4 + {16 - 10}] [Removing parentheses]

= 19 - [4 + 6] [Removing braces]

= 19 - 10 [Removing square brackets]

= 9

Q5

Answer :

Given expression:

= 36 - [18 - {14 - (15 - 4 ÷ 2 × 2)}]

= 36 - [18 - {14 - (15 - 2 × 2)}] [Performing division]

= 36 - [18 - {14 - (15 - 4)}] [Performing multiplication]

= 36 - [18 - {14 - 11}] [Removing parentheses]

= 36 - [18 - 3] [Removing braces]

= 36 - 15 [Removing square brackets]

= 21

Q6

Answer :

Given expression:

= 27 - [18 - {16 - (5 - $\overline{4-1}$)}]

= 27 - [18 - {16 - (5 - 3)}] [Removing bar]

= 27 - [18 - {16 - 2}] [Removing parentheses]

= 27 - [18 - 14] [Removing braces]

= 27 - 4 [Removing square brackets]

= 23

Q7

Answer :

Given expression:

$= 4\frac{4}{5} \div \frac{3}{5} \text{ of } 5 + \frac{4}{5} \times \frac{3}{10} - \frac{1}{5}$

$= 4\frac{4}{5} \div \frac{3}{5} \times \frac{5}{1} + \frac{4}{5} \times \frac{3}{10} - \frac{1}{5}$ (Removing 'of')

$= \frac{24}{5} \div \frac{3}{1} + \frac{4}{5} \times \frac{3}{10} - \frac{1}{5}$

$= \frac{24}{5} \times \frac{1}{3} + \frac{4}{5} \times \frac{3}{10} - \frac{1}{5}$ (Removing '÷')

$= \frac{8}{5} + \frac{4}{5} \times \frac{3}{10} - \frac{1}{5}$ (Removing '×')

$= \frac{8}{5} + \frac{6}{25} - \frac{1}{5}$ (Removing '×')

$= \frac{40+6-5}{25} = \frac{41}{25} = 1\frac{16}{25}$

Q8

Answer :

Given expression:

$= \left(\frac{2}{3} + \frac{4}{9}\right) \text{ of } \frac{3}{5} \div 1\frac{2}{3} \times 1\frac{1}{4} - \frac{1}{3}$

$= \left(\frac{6+4}{9}\right) \text{ of } \frac{3}{5} \div 1\frac{2}{3} \times 1\frac{1}{4} - \frac{1}{3}$ (Removing parentheses)

$= \frac{10}{9} \times \frac{3}{5} \div 1\frac{2}{3} \times 1\frac{1}{4} - \frac{1}{3}$ (Removing 'of')

$= \frac{2}{3} \div \frac{5}{3} \times 1\frac{1}{4} - \frac{1}{3}$

$= \frac{2}{3} \times \frac{3}{5} \times \frac{5}{4} - \frac{1}{3}$ (Removing '÷')

$= \frac{2}{5} \times \frac{5}{4} - \frac{1}{3}$

$= \frac{1}{2} - \frac{1}{3}$ (Removing '×')

$= \frac{(3-2)}{6} = \frac{1}{6}$

Q9

Answer :

The given expression

$= 7\frac{1}{3} \div \frac{2}{3} \text{ of } 2\frac{1}{5} + 1\frac{3}{8} \div 2\frac{3}{4} - 1\frac{1}{2}$

$= \frac{22}{3} \div \frac{2}{3} \text{ of } \frac{11}{5} + \frac{11}{8} \div \frac{11}{4} - \frac{3}{2}$

$= \frac{22}{3} \div \frac{2}{3} \times \frac{11}{5} + \frac{11}{8} \div \frac{11}{4} - \frac{3}{2}$ (Removing 'of')

$= \frac{22}{3} \div \frac{22}{15} + \frac{11}{8} \div \frac{11}{4} - \frac{3}{2}$

$= \frac{22}{3} \times \frac{15}{22} + \frac{11}{8} \div \frac{11}{4} - \frac{3}{2}$ (Removing '÷')

$= 5 + \frac{11}{8} \times \frac{4}{11} - \frac{3}{2}$ (Removing '÷')

$= 5 + \frac{1}{2} - \frac{3}{2}$ (On simplifying)

$= \frac{10+1-3}{2} = \frac{8}{2} = 4$

Q10

Answer :

Given expression:

$= 5\frac{1}{7} - \left\{3\frac{3}{10} \div \left(2\frac{4}{5} - \frac{7}{10}\right)\right\}$

$= \frac{36}{7} - \left\{\frac{33}{10} \div \left(\frac{14}{5} - \frac{7}{10}\right)\right\}$

$= \frac{36}{7} - \left\{\frac{33}{10} \div \left(\frac{28-7}{10}\right)\right\}$

$= \frac{36}{7} - \left\{\frac{33}{10} \div \frac{21}{10}\right\}$ (Removing parentheses)

$= \frac{36}{7} - \left\{\frac{33}{10} \times \frac{10}{21}\right\}$ (Removing '÷')

$= \frac{36}{7} - \frac{11}{7}$ (Removing braces)

$= \frac{36-11}{7} = \frac{25}{7} = 3\frac{4}{7}$ (Simplifying)

Q11

Answer :

Given expression:

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

$= \frac{39}{4} \div \left[\frac{13}{6} + \left\{\frac{13}{3} - \left(\frac{3}{2} + \frac{7}{4}\right)\right\}\right]$

$= \frac{39}{4} \div \left[\frac{13}{6} + \left\{\frac{13}{3} - \left(\frac{6+7}{4}\right)\right\}\right]$

$= \frac{39}{4} \div \left[\frac{13}{6} + \left\{\frac{13}{3} - \frac{13}{4}\right\}\right]$ (Removing parentheses)

$= \frac{39}{4} \div \left[\frac{13}{6} + \left\{\frac{52-39}{12}\right\}\right]$

$= \frac{39}{4} \div \left[\frac{13}{6} + \frac{13}{12}\right]$ (Removing braces)

$= \frac{39}{4} \div \left[\frac{26+13}{12}\right]$

$= \frac{39}{4} \div \frac{39}{12}$ (Removing square brackets)

$= \frac{39}{4} \times \frac{12}{39} = 3$ (Removing '÷')

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