Exercise 1D

Q4

Answer :

(i)

$$\frac{-23}{17} \times \frac{18}{35} = \frac{18}{35} \times \boxed{\frac{-23}{17}} \qquad \left(\because a \times b = b \times a\right)$$

(ii)

$$-38 \times \frac{-7}{9} = \frac{-7}{9} \times \boxed{-38} \qquad \left(\because a \times b = b \times a\right)$$

(iii)

$$\left(\frac{15}{7} \times \frac{-21}{10}\right) \times \frac{-5}{6} = \boxed{\frac{15}{7}} \times \left(\frac{-21}{10} \times \frac{-5}{6}\right) \quad \left[\because a \times \left(b \times c\right) = \left(a \times b\right) \times c\right)\right]$$

(iv)

$$\frac{-12}{5} \times \left(\frac{4}{15} \times \frac{25}{-16}\right) = \left(\frac{-12}{5} \times \frac{4}{15}\right) \times \boxed{\frac{25}{-16}} \quad \left[\because a \times \left(b \times c\right) = \left(a \times b\right) \times c\right]$$

Q5

Answer :

(i)

Reciprocal of $\frac{13}{25}$ is $\frac{25}{13}$.

(ii)

Reciprocal of $\frac{-17}{12}$ is $\frac{12}{-17}$, that is, $\frac{-12}{17}$.

(iii)

Reciprocal of $\frac{-7}{24}$ is $\frac{24}{-7}$, that is, $\frac{-24}{7}$.

(iv)

Reciprocal of 18 is $\frac{1}{18}$.

(v)

Reciprocal of -16 is $\frac{1}{-16}$, that is, $\frac{-1}{16}$.

(vi)

Reciprocal of $\frac{-3}{-5}$ is $\frac{-5}{-3}$, that is, $\frac{5}{3}$.

(vii)

Reciprocal of -1 is -1.

(viii)

Reciprocal of $\frac{0}{2}$ does not exist as $\frac{2}{0} = \infty$.

(ix)

Reciprocal of $\frac{2}{-5}$ is $\frac{-5}{2}$.

(x)

Reciprocal of $\frac{-1}{8}$ is -8.

Q6

Answer :

We know that $a^{-1} = \frac{1}{a}$ or $a^{-1} \times a = 1$

(i)

$\left(\frac{5}{8}\right)^{-1} = \frac{8}{5}$

$\because \frac{5}{8} \times \left(\frac{5}{8}\right)^{-1} = 1$

(ii)

$\left(\frac{-4}{9}\right)^{-1} = \frac{9}{-4} = \frac{-9}{4}$

$\because \frac{-4}{9} \times \left(\frac{-4}{9}\right)^{-1} = 1$

(iii)

$\left(-7\right)^{-1} = \frac{1}{-7} = \frac{-1}{7}$

$\because -7 \times \left(-7\right)^{-1} = 1$

(iv) $\left(-3\right)^{-1}$

$\left(-3\right)^{-1} = \frac{1}{-3} = \frac{-1}{3}$

$\because \left(-3\right)^{-1} \times (-3) = 1$

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