Rational Numbers Ex 1.6 Q4

Answer :

$(i)\ \frac{3}{5}\times\left(\frac{35}{24}+\frac{10}{1}\right)=\frac{3}{5}\times\frac{35}{24}+\frac{3}{5}\times\frac{10}{1}=\frac{7}{8}+\frac{6}{1}=\frac{7+48}{8}=\frac{55}{8}$

$(ii)\ \frac{-5}{4}\times\left(\frac{8}{5}+\frac{16}{5}\right)=\frac{-5}{4}\times\frac{8}{5}+\frac{-5}{4}\times\frac{16}{5}=\frac{-2}{1}+\frac{-4}{1}=-6$

$(iii)\ \frac{2}{7}\times\left(\frac{7}{16}-\frac{21}{4}\right)=\frac{2}{7}\times\frac{7}{16}-\frac{2}{7}\times\frac{21}{4}=\frac{1}{8}-\frac{3}{2}=\frac{1-12}{8}=\frac{-11}{8}$

$(iv)\ \frac{3}{4}\times\left(\frac{8}{9}-40\right)=\frac{3}{4}\times\frac{8}{9}-\frac{3}{4}\times 40=\frac{2}{3}-30=\frac{2-90}{3}=\frac{-88}{3}$

Rational Numbers Ex 1.6 Q5

Answer :

(i) Multiplicative inverse (reciprocal) of $9=\frac{1}{9}$

(ii) Multiplicative inverse (reciprocal) of $-7=\frac{-1}{7}$

(iii) Multiplicative inverse (reciprocal) of $\frac{12}{5}=\frac{5}{12}$

(iv) Multiplicative inverse (reciprocal) of $\frac{-7}{9}=\frac{-9}{7}$

(v) Multiplicative inverse (reciprocal) of $\frac{-3}{-5}=\frac{-5}{-3}$ *or* $\frac{5}{3}$

(vi) Multiplicative inverse (reciprocal) of $\frac{2}{3}\times\frac{9}{4}=\frac{3}{2}\times\frac{4}{9}=\frac{2}{3}$

(vii) Multiplicative inverse (reciprocal) of $\frac{-5}{8}\times\frac{16}{15}=\frac{8}{-5}\times\frac{15}{16}=\frac{-3}{2}$

(viii) Multiplicative inverse (reciprocal) of $-2\times\frac{-3}{5}=\frac{1}{-2}\times\frac{5}{-3}=\frac{5}{6}$

(ix) Multiplicative inverse (reciprocal) of $-1=\frac{1}{-1}=-1$

(x) Multiplicative inverse (reciprocal) of $\frac{0}{3}=\frac{3}{0}=$ undefined

(ix) Multiplicative inverse (reciprocal) of $1=\frac{1}{1}=1$

Rational Numbers Ex 1.6 Q6

Answer :

(i) Commutative property
(ii) Commutative property
(iii) Distributivity of multiplication over addition
(iv) Associativity of multiplication
(v) Existence of identity for multiplication
(vi) Existence of multiplicative inverse
(vii) Multiplication by 0
(viii) Distributive property

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