Rational Numbers Ex 1.7 Q9

Answer :

$$(i)\ x=\frac{2}{3}, y=\frac{3}{2}$$

$$\text{So, } (x+y)\div(x-y)$$

$$=\left(\frac{2}{3}+\frac{3}{2}\right)\div\left(\frac{2}{3}-\frac{3}{2}\right)$$

$$=\frac{13}{6}\times\frac{6}{-5}=\frac{-13}{5}$$

$$\text{So, } (x+y)\div(x-y)=\frac{-13}{5}$$

$$(ii)\ x=\frac{2}{5}, y=\frac{1}{2}$$

$$\text{So, } (x+y)\div(x-y)=\left(\frac{2}{5}+\frac{1}{2}\right)\div\left(\frac{2}{5}-\frac{1}{2}\right)$$

$$=\frac{9}{10}\times\frac{10}{-1}=-9$$

$$\text{So, } (x+y)\div(x-y)=-9$$

$$(iii)\ x=\frac{5}{4}, y=\frac{-1}{3}$$

$$\text{So, } (x+y)\div(x-y)=\left(\frac{5}{4}+\frac{-1}{3}\right)\div\left(\frac{5}{4}-\frac{-1}{3}\right)$$

$$= \frac{11}{12} \times \frac{12}{19} = \frac{11}{19}$$

so, $(x+y) \div (x-y) = \frac{11}{19}$

(iv) $x = \frac{2}{7}, y = \frac{4}{3}$

so, $(x+y) \div (x-y) = (\frac{2}{7} + \frac{4}{3}) \div (\frac{2}{7} - \frac{4}{3})$

$$= \frac{34}{21} \times \frac{21}{-22} = \frac{-17}{11}$$

so, $(x+y) \div (x-y) = \frac{-17}{11}$

(v) $x = \frac{1}{4}, y = \frac{3}{2}$

so, $(x+y) \div (x-y) = (\frac{1}{4} + \frac{3}{2}) \div (\frac{1}{4} - \frac{3}{2})$

$$= \frac{7}{4} \times \frac{4}{-5} = \frac{-7}{5}$$

so, $(x+y) \div (x-y) = \frac{-7}{5}$.

Rational Numbers Ex 1.7 Q10

Answer :

The cost of $7\frac{2}{3}$ metres of rope is Rs $12\frac{3}{4}$.

$\therefore$ Cost per metre $= 12\frac{3}{4} \div 7\frac{2}{3}$

$= \frac{51}{4} \div \frac{23}{3}$

$= \frac{51}{4} \times \frac{3}{23}$

$= \frac{153}{92}$

$= \text{Rs } 1\frac{61}{92}$

Rational Numbers Ex 1.7 Q11

Answer :

The cost of $2\frac{1}{3}$ metres of cloth is Rs $75\frac{1}{4}$.

$\therefore$ Cost per metre $= 75\frac{1}{4} \div 2\frac{1}{3}$

$= \frac{301}{4} \div \frac{7}{3}$

$= \frac{301}{4} \times \frac{3}{7}$

$= \frac{129}{4}$

$=$ Rs $32\frac{1}{4}$

Thus, Rs $32\frac{1}{4}$ or Rs 32.25 is the cost of cloth per metre.

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