

3/4/20

VIII Maths

Ch-1 Rational Numbers.

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① Write five rational numbers smaller than 2

Sol. 2 can be written in  $\frac{p}{q}$  form as  $\frac{10}{5}$ .  
 $\therefore$  possible 5 rational numbers less than 2  $\rightarrow \frac{9}{5}, \frac{8}{5}, \frac{7}{5}, \frac{6}{5}, \frac{5}{5}$

② Write three rational numbers greater than -3

Sol -3 can be written in  $\frac{p}{q}$  form as  $\frac{-15}{5}$   
 $\therefore$  possible 3 rational numbers greater than -3 are  $\frac{-14}{5}, \frac{-13}{5}, \frac{-10}{5}, \frac{0}{5}$

③ Find 10 rational numbers between  $\frac{3}{5}$  and  $\frac{3}{4}$

Sol First convert  $\frac{3}{5}$  and  $\frac{3}{4}$  into like fraction as  $\frac{3 \times 4}{5 \times 4}$  and  $\frac{3 \times 5}{4 \times 5}$   
 $\rightarrow \frac{12}{20}, \frac{15}{20}$  Again  $\frac{12 \times 5}{20 \times 5} = \frac{60}{100}$  and  $\frac{15 \times 5}{20 \times 5} = \frac{75}{100}$

$\therefore$  10 rational number b/w  $\frac{60}{100}$  and  $\frac{75}{100}$  or  $\frac{3}{5}$  and  $\frac{3}{4} \rightarrow \frac{61}{100}, \frac{62}{100}, \frac{63}{100},$

$\frac{64}{100}, \frac{65}{100}, \frac{66}{100}, \frac{67}{100}, \frac{68}{100}, \frac{69}{100}, \frac{70}{100}, \frac{71}{100}$  etc.

④ Subtract (i)  $\frac{4}{9}$  from  $-\frac{1}{6}$  (ii)  $-\frac{4}{15}$  from  $\frac{3}{10}$

Sol (i)  $\frac{4}{9}$  from  $-\frac{1}{6} \Rightarrow -\frac{1}{6} - \frac{4}{9} = \frac{-3-8}{18} = -\frac{11}{18}$  Ans

(ii)  $-\frac{4}{15}$  from  $\frac{3}{10} = \frac{3}{10} - \frac{(-4)}{15} = \frac{3}{10} + \frac{4}{15} = \frac{9+8}{30} = \frac{17}{30}$

⑤ Simplify  $\rightarrow -\frac{2}{3} + 1\frac{5}{6} + -\frac{3}{2}$

Sol  $-\frac{2}{3} + 1\frac{5}{6} + -\frac{3}{2} = -\frac{2}{3} + \frac{11}{6} + -\frac{3}{2} = \frac{-4+11+(-9)}{6} = \frac{11+(-13)}{6} = -\frac{2}{6} = -\frac{1}{3}$  Ans

⑥ Find the reciprocal of  $\frac{2}{5} \times -\frac{17}{13}$

Sol  $\frac{2 \times -17}{5 \times 13} = -\frac{34}{65}$  reciprocal of  $-\frac{34}{65} = -\frac{65}{34}$

⑧ Find the product of  $\frac{1}{5} \times \frac{5}{6}$  Sol  $\rightarrow \frac{1 \times 5}{5 \times 6} = \frac{1}{6}$

⑨  $\frac{3}{5} \times \frac{5}{8} = \frac{3 \times 5}{5 \times 8} = \frac{3}{8}$

(H.W.)

⑥ Find the product

$-90 \times -55$

(5)

$$(iii) \frac{-4}{95} \text{ from } \frac{3}{10} = \frac{3}{10} - \frac{(-4)}{15} = \frac{3}{10} + \frac{4}{15} = \frac{9+8}{30} = \frac{17}{30}$$

Simplify  $\rightarrow -\frac{2}{3} + 1\frac{5}{6} + -\frac{3}{2}$

Sol  $-\frac{2}{3} + 1\frac{5}{6} + -\frac{3}{2} = -\frac{2}{3} + \frac{11}{6} + -\frac{3}{2} = \frac{-4+11+(-9)}{6} = \frac{11+(-13)}{6} = -\frac{2}{6} = -\frac{1}{3}$  Ans

(6)

Find the reciprocal

of  $\frac{2x-17}{5} \times \frac{-17}{13}$

Sol  $\frac{2x-17}{5 \times 13} = -\frac{34}{65}$  reciprocal of  $-\frac{34}{65} = -\frac{65}{34}$

(8) Find the product of

$\frac{1}{5} \times \frac{5}{6}$  Sol  $\rightarrow \frac{1 \times 5}{5 \times 6} = \frac{1}{6}$

(X)  $\frac{3}{5} \times \frac{5}{8} = \frac{3 \times 5}{5 \times 8} = \frac{3}{8}$

(H.Wo)

(1)

Write 5 rational numbers greater than -2

(2)

Write 4 rational numbers less than 3

(3)

Find 5 rational numbers b/w  $\frac{3}{4}$  and  $\frac{1}{5}$

(4)

Subtract  $-\frac{3}{5}$  from  $\frac{1}{6}$

(5)

Subtract  $\frac{1}{9}$  from  $-\frac{3}{6}$

(6) Find the product

$-\frac{90}{11} \times -\frac{55}{72}$

(7) Find the product  $\frac{18}{35} \times \frac{25}{8}$

(8) Find the reciprocal of  $-\frac{19}{16}$  &  $-\frac{7}{8}$

(9) Divide  $\rightarrow \frac{7}{18}$  by  $-\frac{14}{51}$

(10) Divide  $\rightarrow \frac{5}{9}$  by 15