

① Rational number. A no. which can be expressed in  $\frac{p}{q}$  form where  $p$  and  $q$  are integers and  $q \neq 0$  is called a rational no. eg  $\frac{3}{4}, \frac{1}{3}, \frac{6}{10}$  etc

② Write five negative rational numbers

Sol  $-\frac{3}{4}, -\frac{8}{7}, -\frac{6}{10}, -\frac{7}{-8}, -\frac{10}{19}$

③ Compare  $-\frac{8}{9}$  and  $-\frac{4}{5}$

Sol  $-\frac{8}{9}$  and  $-\frac{4}{5}$

LCM of 9 and 5 =  $9 \times 5 = 45$

Now  $\frac{-8 \times 5}{9 \times 5} = \frac{-40}{45}$  and  $\frac{-4 \times 9}{5 \times 9} = \frac{-36}{45}$

Since  $-40 < -36 \therefore \frac{-40}{45} < \frac{-36}{45}$

$\therefore -\frac{8}{9} < -\frac{4}{5}$

④ Find the absolute value of  $-\frac{15}{17}$

Sol  $|\frac{-15}{17}| = \frac{15}{17}$

⑤ Absolute value of  $(-\frac{1}{3} \times \frac{7}{-3})$

Sol  $|\frac{-1}{3} \times \frac{7}{-3}| = |-\frac{1}{3} \times -\frac{7}{3}| = |\frac{7}{9}| = \frac{7}{9}$

⑥ Write the additive inverse of (i)  $-\frac{7}{19}$  (ii)  $\frac{21}{12}$

Sol. Additive inverse of  $-\frac{7}{19} = \frac{7}{19}$  because  $\frac{-7}{19} + \frac{7}{19} = \frac{-7+7}{19} = \frac{0}{19} = 0$

Additive inverse of  $\frac{21}{12} = -\frac{21}{12} \therefore \frac{21}{12} + -\frac{21}{12} = \frac{21-21}{12} = \frac{0}{12} = 0$

⑦ Find the multiplicative inverse of

$\frac{1}{5}$  Sol  $\rightarrow \frac{5}{1}$

⑧ Multiplicative inverse of  $-\frac{5}{8} \times -\frac{3}{7}$

Sol  $\rightarrow -\frac{5}{8} \times -\frac{3}{7} = \frac{5 \times 3}{8 \times 7} = \frac{15}{56} = \frac{56}{15}$

Q.9. Write the following rational numbers in the standard form

(i)  $\frac{17}{-25}$  (ii)  $\frac{-14}{-35}$  (iii)  $\frac{-27}{72}$

Sol: (i)  $\frac{17}{-25} \times \frac{(-1)}{(-1)} = \frac{-17}{25}$  (ii)  $\frac{-14}{-35} = \frac{14 \div 7}{35 \div 7} = \frac{2}{5}$

(iii)  $\frac{-27}{72} \div \frac{9}{9} = \frac{-3}{8}$

(10) Find the sum of  $-\frac{15}{4}$  and  $-\frac{5}{8}$

Sol:  $-\frac{15}{4} + -\frac{5}{8} \rightarrow$  Lcm of 4 and 8 = 8  
 $\frac{-30 + (-5)}{8} = \frac{-35}{8}$  Ans

### Home Work

(1) Write any five positive rational numbers.

(2) Compare  $\frac{-9}{-11}$  and  $\frac{5}{-17}$

(3) Write the smallest whole number.

(4) Write first five prime numbers.

(5) Find the absolute value of (i)  $-\frac{11}{23}$  (ii)  $\frac{1}{4} \times -\frac{5}{6}$

(6) Write the additive inverse of (i)  $-\frac{5}{11}$  (ii)  $-\frac{9}{-22}$

(7) Write the multiplicative inverse of (i)  $\frac{6}{9}$  (ii)  $-\frac{7}{3} \times \frac{4}{5}$

(8) Add  $\rightarrow \frac{5}{6} + -\frac{11}{12}$

(9) Subtract  $\frac{1}{5}$  from  $\frac{3}{5}$

(10) Subtract  $-\frac{4}{15}$  from  $\frac{3}{10}$