



# PUBLIC SCHOOL DARBHANGA

SESSION ( 2020-21)  
CLASS-VIII  
MATHEMATICS  
Topic : Rational numbers

**Q1. Using appropriate properties find :**

(i)

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

(ii)  $\frac{2}{5} \times \left(-\frac{3}{7}\right) - \frac{1}{6} \times \frac{3}{2} + \frac{1}{14} \times \frac{2}{5}$

**Q2. Write the additive inverse of each of the following:**

(i)  $\frac{2}{8}$

(ii)  $\frac{-5}{9}$

(iii)  $\frac{-6}{-5}$

(iv)  $\frac{2}{-9}$

(v)  $\frac{19}{-6}$

**Q3. Verify that :  $-(-X) = X$  for.**

(i)  $X = \frac{11}{15}$       (ii)  $\frac{-13}{17}$

**Q4. Find the multiplicative inverse of the following:**

(i) -13

(ii)  $\frac{-13}{19}$

(iii)  $\frac{1}{5}$

(iv)  $-\frac{5}{8} \times \frac{-3}{7}$

(v)  $-1 \times \frac{-3}{7}$

(vi)  $-1$

**Q5. Name the property under multiplication used in each of the following.**

(i)  $\frac{-4}{5} \times 1 = 1 \times \frac{-4}{5} = \frac{-4}{5}$

(ii)  $-\frac{13}{17} \times -\frac{2}{7} = -\frac{2}{7} \times -\frac{13}{17}$

(iii)  $-\frac{19}{29} \times \frac{29}{-19} = 1$

**Q6. Multiply  $\frac{6}{13}$  by the reciprocal of  $-\frac{7}{16}$ .**

**Q7. Tell what property allows you to compute**

$\frac{1}{3} \times 6 \times \frac{4}{3}$  as  $\frac{1}{3} \times 6 \times \frac{4}{3}$

**Q8. Is  $\frac{8}{9}$  the multiplicative inverse of  $-1\frac{1}{8}$ ? why or why not?**

**Q9. Is 0.3 the multiplicative inverse of  $3\frac{1}{3}$ ? why or why not?**

**Q10. Write.**

- (i) The rational number that does not have a reciprocal.
- (ii) The rational numbers that are equal to their reciprocals.
- (iii) The rational number that is equal to its negative.

**Q11. Fill in the blanks.**

- (i) Zero has \_\_\_\_\_ reciprocal.
- (ii) The numbers \_\_\_\_\_ and \_\_\_\_\_ are their own reciprocals
- (iii) The reciprocal of  $-5$  is \_\_\_\_\_.
- (iv) Reciprocal of  $\frac{1}{x}$ , where  $x \neq 0$  is \_\_\_\_\_.
- (v) The product of two rational numbers is always a \_\_\_\_\_.
- (vi) The reciprocal of a positive rational number is \_\_\_\_\_.

