Rational Numbers

1. Fill in the blanks:

(i)　　The product of a number and its product is _____.

(ii)　　The rational number _____ has no reciprocal.

(iii)　The reciprocal of the reciprocal of a number is _____.

(iv)　The rational number _____ is neither positive nor negative.

(v)　　_____ is the only rational number which is equal its additive inverse.

2. Write:

(i)　　A rational number which has no reciprocal.

(ii)　　A rational number whose product with a given rational number is equal to the given rational number.

(iii)　A rational number which is equal to its reciprocal.

3. Verify that:

(i)　　$\frac{-1}{2} + \left[\left(\frac{-4}{3} \right) + \frac{3}{7} \right]$ and $\left[\left(\frac{-1}{2} \right) + \frac{3}{7} \right] + \left(\frac{-4}{3} \right)$ are there same

(ii)　　$\frac{2}{3} \times \left[\frac{-6}{7} + \frac{4}{5} \right] = \left[\frac{2}{3} \times \frac{4}{5} \right] \times \left(\frac{-6}{7} \right)$

4. Find: $\frac{5}{22} + \frac{3}{7} + \left(\frac{-8}{21} \right) + \left(\frac{-6}{11} \right)$
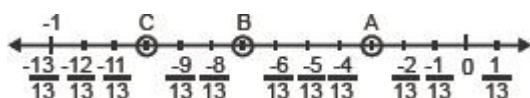
5. Find: $\left(\frac{-14}{9} \right) \times \frac{3}{5} \times \left(\frac{-4}{7} \right) \times \frac{15}{16}$

6. Find three rational number between $\frac{3}{7}$ and $\frac{2}{3}$.

7. Find five rational numbers between $\frac{2}{5}$ and $\frac{1}{4}$.

8. Find 10 rational numbers between $\left(-\frac{2}{3} \right)$ and $\frac{2}{3}$.

9. Write the rational number represented by the points A, B, and C on the following number line:

10. The product of two rational numbers is $\left(\frac{-28}{81} \right)$. If one of them is $\frac{-2}{3}$, then find the other: