

Board – icse

Class – 8

Topic – Rational number

1. Add the following rational numbers:

(i) $\frac{13}{7}$ and $\frac{2}{7}$ (Ans: $\frac{15}{7}$)

(ii) $\frac{9}{17}$ and $-\frac{5}{17}$ (Ans: $\frac{4}{17}$)

2. Add and express the sum as a mixed fraction:

(i) $-\frac{12}{5} + \frac{43}{10}$ (Ans: $1\frac{9}{10}$)

(ii) $\frac{24}{7} + -\frac{11}{4}$ (Ans: $\frac{19}{28}$)

(iii) $-\frac{31}{6} + -\frac{27}{8}$ (Ans: $-8\frac{13}{24}$)

3. Simplify:

(i) $\frac{8}{9} + -\frac{11}{6}$ (Ans: $-\frac{17}{18}$)

(ii) $-\frac{5}{16} + \frac{7}{24}$ (Ans: $-\frac{1}{48}$)

(iii) $\frac{1}{-12} + \frac{2}{-15}$ (Ans: $-\frac{13}{60}$)

4. Find the additive inverse of each of the following:

(i) $\frac{1}{3}$ (Ans: $-\frac{1}{3}$)

(ii) $\frac{23}{9}$ (Ans: $-\frac{23}{9}$)

(iii) -18 (Ans: 18)

5. Find the product of each of the following:

(i) $\frac{-2}{3} \times \frac{6}{7}$ (Ans: $-\frac{4}{7}$)

(ii) $\frac{-12}{5} \times \frac{10}{-3}$ (Ans: 8)

(iii) $\frac{25}{-9} \times \frac{3}{-10}$ (Ans: $\frac{5}{8}$)

6. Simplify each of the following and express the result as a rational number:

(i) $-\frac{16}{21} \times \frac{14}{5}$ (Ans: $-\frac{32}{15}$)

(ii) $\frac{7}{6} \times -\frac{3}{28}$ (Ans: $-\frac{1}{8}$)

7. Divide the rationals:

(i) 1 by $\frac{1}{2}$ (Ans: 2)

(ii) 5 by $-\frac{5}{7}$

(Ans:-7)

(iii) $-\frac{3}{4}$ by $\frac{9}{-16}$

(Ans: $\frac{4}{3}$)

8. The sum of two rational numbers is -2. If one of the numbers is $-\frac{14}{5}$, find the other. (Ans: $\frac{4}{5}$)

9. The product of two rational numbers is 15. If one of the numbers is -10, find the other. (Ans: $-\frac{3}{2}$)

10. By what rational number should $-\frac{8}{39}$ be multiplied to obtain $\frac{1}{26}$? (Ans: $-\frac{3}{16}$)

11. Find out a rational number lying between 2 and 3. (Ans: $\frac{5}{2}$)

12. Find out a rational number lying between $-\frac{1}{3}$ and $\frac{1}{2}$. (Ans: $\frac{1}{12}$)

13. Find out two rational numbers lying between -3 and -2. (Ans: $-\frac{5}{2}, -\frac{9}{4}$)

14. Find out six rational numbers lying between $-\frac{4}{8}$ and $\frac{3}{8}$. (Ans: $\frac{3}{8}, -\frac{2}{8}, -\frac{1}{8}, \frac{0}{8}, \frac{1}{8}, \frac{2}{8}$)

15. Find out three rational numbers lying between $\frac{2}{3}$ and $\frac{3}{4}$. (Ans: $\frac{33}{48}, \frac{17}{24}, \frac{35}{48}$)