

Board – CBSE

Class – 8th

Topic – Rational Number (Problem for Practice)

By Using property find value of (Q.1 to Q.3)

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

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

Q.3 $\frac{5}{7} + \frac{1}{3} + \frac{8}{9} + \frac{1}{14}$

Q.4 Subtract the first rational number from the second in each of the following:

(i) $\frac{3}{8}, \frac{5}{8}$

(ii) $\frac{-7}{9}, \frac{4}{9}$

(iii) $\frac{-2}{11}, \frac{-9}{11}$

(iv) $\frac{11}{13}, \frac{-4}{13}$

(v) $\frac{1}{4}, \frac{-3}{8}$

(vi) $\frac{-2}{3}, \frac{5}{6}$

(vii) $\frac{-6}{7}, \frac{-13}{14}$

(viii) $\frac{-8}{33}, \frac{-7}{22}$

Q.5 The sum of the two numbers is $\frac{5}{9}$. If one of the numbers is $\frac{1}{3}$, find the other.

Q.6 The sum of two numbers is $\frac{-1}{3}$. If one of the numbers is $\frac{-12}{3}$, find the other.

Q.7 The sum of two numbers is $\frac{-4}{3}$. If one of the numbers is -5 , find the other.

Q.8 The sum of two rational numbers is -8 . If one of the numbers is $\frac{-15}{7}$, find the other.

Q.9 What should be added to $\frac{-7}{8}$ so as to get $\frac{5}{9}$?

Q.10 What number should be added to $\frac{-5}{11}$ so as to get $\frac{26}{33}$?

Q.11 What number should be added to $\frac{-5}{7}$ to get $\frac{-2}{3}$?

- Q.12** What number should be subtracted from $\frac{-5}{3}$ to get $\frac{5}{6}$?
- Q.13** What number should be subtracted from $\frac{3}{7}$ to get $\frac{5}{4}$?
- Q.14** What should be added to $\left(\frac{2}{3} + \frac{3}{5}\right)$ to get $\frac{-2}{15}$?
- Q.15** What should be added to $\left(\frac{1}{2} + \frac{1}{3} + \frac{1}{5}\right)$ to get 3?
- Q.16** What should be subtracted from $\left(\frac{3}{4} - \frac{2}{3}\right)$ to get $\frac{-1}{6}$?
- Q.17** Simplify each of the following and write as a rational number of the form $\frac{p}{q}$:

(i) $\frac{3}{4} + \frac{5}{6} + \frac{-7}{8}$ (ii) $\frac{2}{3} + \frac{-5}{6} + \frac{-7}{9}$

(iii) $\frac{-11}{2} + \frac{7}{6} + \frac{-5}{8}$ (iv) $\frac{-4}{5} + \frac{-7}{10} + \frac{-8}{15}$

(v) $\frac{-9}{10} + \frac{22}{15} + \frac{13}{-20}$ (vi) $\frac{5}{3} + \frac{3}{-2} + \frac{-7}{3} + 3$

- Q.18** Express each of the following as a rational number of the form $\frac{p}{q}$:

(i) $\frac{-8}{3} + \frac{-1}{4} + \frac{-11}{6} + \frac{3}{8} - 3$

(ii) $\frac{6}{7} + 1 + \frac{-7}{9} + \frac{19}{21} + \frac{-12}{7}$

(iii) $\frac{15}{2} + \frac{9}{8} + \frac{-11}{3} + 6 + \frac{-7}{6}$

(iv) $\frac{-7}{4} + 0 + \frac{-9}{5} + \frac{19}{10} + \frac{11}{14}$

(v) $\frac{-7}{4} + \frac{5}{3} + \frac{-1}{2} + \frac{-5}{6} + 2$

Q.19 Simplify:

(i) $\frac{-3}{2} + \frac{5}{4} - \frac{7}{4}$

(ii) $\frac{5}{3} - \frac{7}{6} + \frac{-2}{3}$

(iii) $\frac{5}{4} - \frac{7}{6} - \frac{-2}{3}$

(iv) $\frac{-2}{5} - \frac{-3}{10} - \frac{-4}{7}$

(v) $\frac{5}{6} + \frac{-2}{5} - \frac{-2}{15}$

(vi) $\frac{3}{8} - \frac{-2}{9} + \frac{-5}{36}$

Q.20 Multiply:

(i) $\frac{7}{11}$ by $\frac{5}{4}$

(ii) $\frac{5}{7}$ by $\frac{-3}{4}$

(iii) $\frac{-2}{9}$ by $\frac{5}{11}$

(iv) $\frac{-3}{17}$ by $\frac{-5}{-4}$

(v) $\frac{9}{-7}$ by $\frac{36}{-11}$

(vi) $\frac{-11}{13}$ by $\frac{-21}{7}$

(vii) $-\frac{3}{5}$ by $-\frac{4}{7}$

(viii) $-\frac{15}{11}$ by 7

Q.21 Give examples of

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

Q.22 Fill in the blanks.

- (a) Zero has ____ reciprocal.
- (b) The numbers ____ and ____ are their own reciprocals.
- (c) The reciprocal of - 5 is ____.
- (d) Reciprocal of $\frac{1}{x}$, where $x \neq 0$ is ____.
- (e) The product of two rational numbers is always a ____.
- (f) The reciprocal of a positive rational number is ____.

Q.23 Represent these numbers on the number line.

(i) $\frac{7}{4}$

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

Q.24 Represent $\frac{-2}{11}$, $\frac{-5}{11}$, $\frac{-9}{11}$ on the number line.

Q.25 Write five rational numbers which are smaller than 2.

Q.26 Find ten rational numbers between $\frac{-2}{5}$ and $\frac{1}{2}$.

Q.27 Find five rational numbers between.

(i) $\frac{2}{3}$ and $\frac{4}{5}$

(ii) $\frac{-3}{2}$ and $\frac{5}{3}$

(iii) $\frac{1}{4}$ and $\frac{1}{2}$

Q.28 Write five rational numbers greater than -2.

Q.29 Find ten rational numbers between $\frac{3}{5}$ and $\frac{3}{4}$.

Q.30 What expression to be added to $(5x^2 - 7x + 2)$ to produce $(7x^2 - 1)$.

(A) $2x^2 + 7x + 3$

(B) $2x^2 + 7x - 3$

(C) $12x^2 - 7x + 1$

(D) $2x^2 - 3$