

A. Write the Missing Terms to Complete the Sentences:

- 1. The ______ property of addition states that the order of adding rational numbers does not change the result.
- 2. The sum of a rational number and its additive inverse is always ______.
- 3. According to the _____ property, changing the grouping of rational numbers does not change the sum.
- 4. The additive identity for rational numbers is ______.
- 5. If $a = \frac{5}{6}$, then a + 0 = a + 0 =_____.

B. Figure out the answers to these questions:

- 1. Find the sum of $\frac{4}{5}$ and $\frac{-6}{5}$
- 2. Solve $\frac{5}{12} + \frac{7}{8}$
- 3. Subtract $\frac{3}{-7}$ from $\frac{3}{7}$
- 4. Add $\frac{3}{5}$ and $\frac{13}{5}$

5. Add
$$\frac{7}{9}$$
 and $\frac{-12}{9}$

6. Add $\frac{-5}{9}$ and $\frac{-17}{9}$

C. Mark each sentence with a True (✔) or False (★):

1. Subtracting a rational number is the same as adding its additive inverse.

$$2.\ \frac{5}{6} - \left(-\frac{1}{3}\right) = \frac{5}{6} - \frac{1}{3}$$

3. The subtraction of two rational numbers always gives a rational number.

$$4. \left(-\frac{2}{5}\right) - \left(\frac{1}{2}\right) = \left(\frac{1}{2}\right) - \left(-\frac{2}{5}\right)$$

5. Rational numbers are not closed under subtraction.

D. Challenge yourself with these questions:

- 1. Aman has $\frac{7}{8}$ of a chocolate bar. He gave $\frac{1}{4}$ of it to his friend. How much chocolate is left with Aman?
- 2. Priya walked $\frac{2}{3}$ km in the morning and later walked $\frac{5}{6}$ km in the evening. What is the difference in the distance she walked in the evening and morning?
- 3. The temperature in Leh was $-\frac{3}{2}$ °C in the morning and rose to $-\frac{1}{4}$ °C in the afternoon. By how much did the temperature increase?
- 4. A tank was filled with $\frac{5}{6}$ litres of water. After leakage, the water level dropped by $\frac{1}{2}$ litre. How much water is left in the tank?
- 5. Aman spent $\frac{3}{4}$ of his pocket money and later got $\frac{1}{3}$ of it refunded. What is the net change in the amount of money he has now compared to the beginning?