International Indian School, Riyadh
Mathematics Worksheet
Std. VIII

Chapter 1. Rational Numbers

1. The product of a number and its multiplicative inverse is _____________.
2. Sum of a number and its negative is _____________.
3. _____________ is the multiplicative identity for rational numbers.
4. _____________ is the additive identity for rational numbers.
5. The reciprocal of a negative rational number is _____________.
6. There are _____________ number of rational numbers between any two numbers.
7. Additive inverse of 0 is _____________.
8. Rational Number _____________ has no reciprocal.
9. The numbers _____________ and _____________ are their own reciprocals.
10. The rational number that is equal to its negative is _____________.
11. Using appropriate properties find:
   (a) \(-\frac{2}{3} \times \frac{2}{5} + \frac{7}{2} \times \frac{2}{5} \times \frac{11}{6}\)
   (b) \(\frac{1}{2} \times \frac{1}{4} + \left(-\frac{7}{18}\right) \times \frac{15}{7} - \frac{7}{4} \times \frac{1}{3}\)
   (c) \(-\frac{5}{4} \times \left(\frac{8}{5} + 16\right)\)
   (d) \(\frac{7}{12} \times \left(-\frac{3}{5}\right) + \left(-\frac{5}{3}\right) \times \frac{7}{12}\)
   (e) \(\frac{2}{21} \times \frac{3}{13} + \frac{-7}{9} - \frac{2}{21} \times \frac{10}{13}\)
   (f) \(-\frac{4}{5} \times \frac{3}{15} \times \left(-\frac{14}{9}\right)\)
12. Represent \(-\frac{2}{5}\) and \(\frac{4}{7}\) on a number line.

13. Verify that \(\frac{7}{7} = \frac{2}{(-2)}\) for \(x = -\frac{2}{5}\).

14. As \(-\frac{4}{17}\) the multiplicative inverse of \(-\frac{4}{17}\) why or why not?

15. As \(0.5\) the multiplicative inverse of \(2\) why or why not?

16. Write five rational numbers greater than \(-5\).

17. Find five rational numbers between
   (a) \(0\) and \(-2\)
   (b) \(-\frac{3}{7}\) and \(\frac{5}{11}\)
   (c) \(-3\) and \(-4\)

18. Find the multiplicative inverse of \(-2\times\frac{-3}{4}\).

19. Find the additive inverse of \(-\frac{2}{9}+\frac{7}{9}\).

20. Multiply \(\frac{8}{13}\) by the reciprocal of \(-\frac{17}{26}\).

21. Reciprocal of \(-\frac{1}{y}\), where \(y \neq 0\) is __________.

22. The product of two negative rational nos is always a _______ rational number.

23. \(-\frac{25}{23} \div 0 = \frac{25}{23}\)

24. \(0 \div (-\frac{25}{23}) = \frac{23}{25}\)

25. State the property used in the following:
   (a) \(-\frac{25}{29} \times 29 = 1\)
   (b) \(\frac{8}{5} + 0 = 0 + \frac{8}{5} = \frac{8}{5}\)
   (c) \(-\frac{2}{9} (\frac{3}{5} + \frac{2}{9}) = -\frac{2}{9} \times \frac{3}{5} + (-\frac{2}{9}) \times \frac{2}{9}\)

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