

CLASS VIII – MATHEMATICS – CHAPTER 01
RATIONAL NUMBERS

Name: _____

Date: _____

- 01.** $1/2 \times 1 =$ _____.
(a). 1 (b). $1/2$ (c). 0 (d). 2
- 02.** What is the additive inverse of $\frac{6}{7}$.
(a). $\frac{6}{7}$ (b). 1 (c). $-\frac{6}{7}$ (d). 0
- 03.** Find the reciprocal of -2.
(a). -1 (b). 2 (c). -2 (d). none of these
- 04.** Write the rational number that is equal to its negative.
(a). 0 (b). 1 (c). -1 (d). 2
- 05.** Write the additive inverse of $2/3$.
(a). $2/3$ (b). 1 (c). $-2/3$ (d). 0
- 06.** Find the multiplicative inverse of -13.
(a). -13 (b). 13 (c). 12 (d). $-\frac{1}{13}$
- 07.** Name the property under multiplication used in $(-1/5) \times (-5) = -5 \times -1/5 = 1$
(a). Reciprocal (b). Commutative property
(c). Associative property (d). none of these Multiplicative identity e
- 08.** Name the property under multiplication used in $-\frac{1}{5} \times 1 = 1 \times (-\frac{1}{5}) = -\frac{1}{5}$.
(a). Multiplicative identity (b). Commutative property (c). Associative property (d). none of these
- 09.** Name the property under multiplication used in $-\frac{1}{5} \times \frac{1}{2} = \frac{1}{2} \times (-\frac{1}{5})$
(a). Commutative property (b). Multiplicative identity (c). Associative property (d). none of these
- 10.** $\frac{1}{4} \times 1 =$ _____.
(a). 1 (b). $\frac{1}{4}$ (c). 0 (d). 4
- 11.** Write the additive inverse of $4/5$
(a). $4/5$ (b). 1 (c). $-4/5$ (d). 0
- 12.** Find the multiplicative inverse of $1/4$.
(a). -4 (b). $\frac{1}{4}$ (c). $-\frac{1}{4}$ (d). 4
- 13.** Find the multiplicative inverse of $2/9$
(a). $-2/9$ (b). $2/9$ (c). $-9/2$ (d). $9/2$
- 14.** Find the reciprocal of $-\frac{1}{4}$.
(a). -5 (b). 5 (c). $-\frac{1}{5}$ (d). none of these
- 15.** Write the additive inverse of $6/7$

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(a). $\frac{6}{7}$

(b). 1

(c). $-\frac{6}{7}$

(d). 0

16. Which of the following is not true?

- (a). rational numbers are closed under addition.
- (b). rational numbers are closed under subtraction.
- (c). rational numbers are closed under multiplication.
- (d). rational numbers are closed under division.

17. Zero (0) is

- (a). the identity for addition of rational numbers.
- (b). the identity for subtraction of rational numbers.
- (c). the identity for multiplication of rational numbers.
- (d). the identity for division of rational numbers.

18. One (1) is

- (a). the identity for addition of rational numbers.
- (b). the identity for subtraction of rational numbers.
- (c). the identity for multiplication of rational numbers.
- (d). the identity for division of rational numbers.

19. Multiplicative inverse of a negative rational number is

- (a). a positive rational number.
- (b). a negative rational number.
- (c). 0
- (d). 1

Q01. Fill in the blanks

- (a). A number which can be written in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$ is called a ___.
- (b). Sum of two rational numbers is a _____.
- (c). For any three rational numbers a , b and c , $a + (b + c) =$ _____.
- (d). _____ $= 1 \times a = a$ for any rational number a .
- (e). _____ are closed under addition.
- (f). _____ is not associative for rational numbers.
- (g). 1 is the _____ for rational numbers.
- (h). _____ are closed under subtraction.
- (i). The product of two rational numbers is always a _____.
- (j). Zero has _____ reciprocal.
- (k). For any three rational numbers a , b and c , $a \times (b \times c) =$ _____.
- (l). Reciprocal of $\frac{1}{x}$, where $x \neq 0$ is _____.

Q02. State true or False: 1 is the only rational number that is equal to its reciprocal.

Q03. Find the reciprocal of

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(a). -2

(b). -1/5

(c). 2/9

(d). 11/33

Q04. Find

(a). $\frac{3}{7} + (-\frac{6}{11}) + (-\frac{8}{21}) + \frac{5}{2}$

(b). $(-\frac{4}{5}) \times (\frac{3}{7}) \times (\frac{15}{16}) \times (-\frac{14}{9})$

(c). $(-\frac{4}{5}) \times (\frac{11}{16}) \times (-\frac{14}{9})$

(d). $\frac{2}{5} \times (-\frac{3}{7}) - \frac{1}{14} - \frac{3}{7} \times \frac{3}{5}$

Q05. Find any ten rational numbers between

(a). -5/6 and 5/8

(b). 1/4 and 1/2

Q07. Verify $-(-x) = x$ for

(a) $x = \frac{3}{5}$

(b). $x = -\frac{7}{9}$

(c). $x = \frac{13}{-15}$

Q08. Verify the property $x + y = y + x$ of rational numbers by taking

(a). $x = 1/2$; $y = 1/2$

(b). $x = -2/3$; $y = -5/6$

(c). $x = -3/7$; $y = 20/21$

Q09. Use the distributivity of multiplication of rational numbers over addition to simplify

(a). $-\frac{3}{5} \times (\frac{35}{24} + \frac{10}{1})$

(b). $-\frac{5}{4} \times [\frac{8}{5} + \frac{16}{15}]$

(c). $\frac{2}{7} \times [\frac{7}{16} - \frac{21}{4}]$

(d). $\frac{3}{4} \times [\frac{8}{9} + 40]$

Q10. If 16 shirts of equal size can be made out of 24m of cloth, how much cloth is needed for making one shirt?

Q11. 2/5 of total number of students of a school come by car while 1/4 of students come by bus to school. All the other students walk to school of which 1/3 walk on their own and the rest are escorted by their parents. If 224 students come to school walking on their own, how many students study in that school?

Q12. A mother and her two daughters got a room constructed for Rs. 62,000. The elder daughter contributes 3/8 of her mother's contribution while the younger daughter contributes 1/2 of her mother's share. How much do the three contribute individually?

Q13. Find the multiplicative inverse of

(a). $-1\frac{1}{8}$

(b). $3\frac{1}{3}$

Q14. By what number should we multiply $-\frac{8}{13}$ so that the product may be 24?