THE VILLAGE
INTERNATIONAL SCHOOL
"We Nurture Dreams"

GRADE -8 **QUESTION BANK** **MATHEMATICS**

CH-2 –Operations with rational numbers

Name : ……. **Class:…….**

MCQ:

1. Associative property is not followed in _____
   (a) whole numbers (b) integers (c) natural numbers (d) rational numbers

2. _____ is the identity for the addition of rational numbers.
   (a) 1 (b) 0 (c) – 1 (d) $\frac{1}{2}$

3. _____ is the multiplicative identity for rational numbers.
   (a) 1 (b) 0 (c) – 1 (d) $\frac{1}{2}$

4. The additive inverse of $\frac{7}{5}$ is
   (a) 1 (b) 0 (c) $-\frac{7}{5}$ (d) $\frac{7}{5}$

5. Zero has _____ reciprocal.
   (a) 1 (b) 2 (c) 3 (d) no

6. The numbers _____ and _____ are their own reciprocals
   (a) 1 and 0 (b) 1 and –1 (c) –1 and 0 (d) none of these.

7. The reciprocal of – 5 is _____.
   (a) 5 (b) 1 (c) $-\frac{1}{5}$ (d) $\frac{1}{5}$

8. Reciprocal of $\frac{1}{x}$, where $x \neq 0$ is _____.
   (a) 1 (b) x (c) 0 (d) none of these

9. The product of two rational numbers is always a _____.
   (a) whole numbers (b) integers (c) natural numbers (d) rational numbers

FILL IN THE BLANKS :

a) The number $\frac{-3}{4}$ lies on ……..side of zero on the number line.

b) Every positive rational number is …..than every negative rational number .

c) ……is the rational number whose reciprocal is not defined.

d)The number …….has no reciprocal

e)The reciprocal of $-2\frac{3}{7}$ is ……..

TRUE/FALSE :

a)A rational number can be represented on a number line where as an integer cannot.

b)The reciprocal of zero is not defined.

c)The rational number $\frac{-3}{-4}$ lies on the left side of 0 on the number line.

d) Between any two rational number there are finite number of rational numbers.

ANSWER THE FOLLOWING QUESTIONS:

1. Find $\frac{3}{7}+\left(\frac{-6}{11}\right)+\left(\frac{-8}{21}\right)+\frac{5}{22}$
2. Find $\frac{-4}{5}\times\frac{3}{7}\times\frac{15}{16}\times\left(\frac{-14}{9}\right)$
3. Find using distributive property: $(i)\left\{\frac{7}{5}\times\left(\frac{-3}{12}\right)\right\}+\left\{\frac{7}{5}\times\frac{5}{12}\right\}$ $(ii)\left\{\frac{9}{16}\times\frac{4}{12}\right\}+\left\{\frac{9}{16}\times\frac{-3}{9}\right\}$
4. Find $\frac{2}{5}\times\frac{-3}{7}-\frac{1}{14}-\frac{3}{7}\times\frac{3}{5}$
5. Simplify: $\frac{-4}{5}\times\frac{3}{7}\times\frac{15}{16}\times\left(\frac{-14}{9}\right)$
6. Multiply $\frac{6}{13}$ by the reciprocal of $\frac{-7}{16}$.
7. What number should be added to $\frac{7}{12}$ to get $\frac{4}{15}$?
8. What number should be subtracted from $-\frac{3}{5}$ to get -2?
9. Is $\frac{8}{9}$ the multiplicative reciprocal of $-1\frac{1}{8}$? Why or why not?

10 . Arrange the following numbers in ascending order: $\frac{4}{-9}, \frac{-5}{12}, \frac{7}{-18}, \frac{-2}{3}$

11 . Arrange the following numbers in descending order: $-\frac{5}{6}, -\frac{7}{12}, \frac{-13}{28}, \frac{23}{-24}$

12.Verify the property , a × (b –c) = a ×b - a× c , by taking a = $\frac{1}{2}$, b= $\frac{-3}{4}$, c= $\frac{-2}{3}$

13.put the correct sign = , < , = ,

i) $\frac{-3}{4} \div \frac{5}{9}$ ..... $\frac{5}{9} \div \frac{3}{4}$ ii) ($\frac{2}{5} \div \frac{3}{8}$) $\div \frac{-3}{4}$ ..... $\frac{2}{5} \div (\frac{3}{8} \div \frac{-3}{5})$

14.Verify the property , a × (b +c) = a ×b + a× c , by taking a = $\frac{-5}{2}$,

b= -2 , c = $\frac{-2}{3}$

15. The length,breadth and height of a cuboid are $\frac{3}{4}$ m , $\frac{8}{5}$m and $\frac{10}{12}$ m , respectively .Will the volume of the cuboid remain the same if its breadth and height are interchanged?

16. Find a rational number between the following:

a) 2 and 3 b) $\frac{-3}{8}$ and $\frac{5}{8}$

17. Find seven rational number between the ollowing:

a)$\frac{-3}{8}$and$\frac{5}{8}$ b)) $\frac{7}{11}$ and $\frac{-5}{11}$

18)Using arithmetic mean method ,find 5 rational numbers between

$\frac{2}{9}$and$\frac{3}{7}$