

FORMATIVE ASSESSMENT - FIRST MID TERM**MATHEMATICS****Max Marks: 50****Std - VIII****Time: 2 Hrs**

Name of the School: <hr/>	Name of the Student: <hr/>
Place: <hr/>	Roll No.: <hr/>

I. Choose the correct answers: **$5 \times 1 = 5$**

- The collection of numbers $-3, -2, -1, 0, 1, 2, 3, \dots$ is called ____
(a) Natural numbers (b) Integers (c) Rational numbers
- The reciprocal of $\left(\frac{1}{7}\right)$
(a) 7 (b) 1 (c) $\frac{1}{7}$
- _____ does not have a reciprocal.
(a) -1 (b) 0 (c) 1
- The additive inverse of -1 is ____
(a) 1 (b) 0 (c) $\frac{1}{2}$
- The value of $\frac{1}{0}$ is ____
(a) 1 (b) 0 (c) Does not exist

II. State whether the following are true or false: **$5 \times 1 = 5$**

- The sum of two negative numbers can be positive.
- Every natural number is a rational number.
- Every rational number is a natural number.
- The multiplicative inverse of 1 is -1 .
- $a^0 = 0$.

III. Do as directed: **$10 \times 2 = 20$**

- Write the following rational number in decimal form up to 3 decimal places.

$$(a) \frac{5}{7} \quad (b) \frac{3}{11}$$

- Convert the following decimals into rational form:

$$(a) 4.479 \quad (b) 19.09$$

- Find the missing numbers. Write your answers in the standard form.

$$(a) \frac{\boxed{}}{\boxed{}} + \frac{-3}{2} = \frac{5}{8} \quad (b) \frac{7}{5} - \frac{\boxed{}}{\boxed{}} = \frac{1}{2}$$

- Multiply. Express your answers in the standard form.

$$(a) \frac{3}{-4} \times \frac{-8}{9} = \frac{\boxed{}}{\boxed{}} \quad (b) \frac{4}{3} \times \frac{5}{-6} = \frac{\boxed{}}{\boxed{}}$$

5. Find the value of

(a) $\frac{3}{4} \div \frac{-6}{7}$ (b) $\frac{-19}{13} \div \left(\frac{-38}{39} \right)$

6. Express 16^3 as a power with base 2.

7. Convert each of the following recurring decimals into fractions.

(a) $\overline{0.733}$ (b) $0.4\overline{7123}$

8. Shyam and Sheena collect coins. Shyam says he has coins from 75 countries out of 99 Countries he wanted to collect. Sheena says, I have only half of what you have. Calculate the number of countries from which Sheena has collected coins.

9. Solve: $\frac{3^{-7} \times 14^{-7} \times 343}{7^{-9} \times 6^{-7}}$

10. If $\frac{3}{4}$ of a box of apples weighs 3 kg and 225 gm, how much does a full box of apples weigh?

IV. Answer the following: (any 2)

$2 \times 5 = 10$

1. Ria was helping her mother fill up water in a large tub. First she poured $3\frac{1}{3}$ buckets of water and then another $2\frac{1}{4}$ buckets of water. If the capacity of the bucket is 5 litres, how many litres of water did Ria pour?

2. Solve:

(a) $\left[\left\{ \left(\frac{-2}{3} \right)^3 \right\}^{-2} \right]^{-1}$ (b) $\left(\frac{2}{5} \right)^{-3}$

3. If $p + 2q = 18$ and $pq = 40$, find $\frac{2}{p} + \frac{1}{q}$.

4. Find 'x' if $5\frac{x}{5} \times 3\frac{3}{4} = 21$.

V. Represent the following numbers on the number line. Represent each number on different number line.

$5 \times 2 = 10$

(a) $-\frac{5}{3}$ b) 0.25 c) $\frac{4}{7}$

d) $-\frac{3}{5}$ e) -0.6