Name: …… **JB Academy, Ayodhya** **Sec./ Roll No……**

Class – VII, Mathematics Review Test

Time: 2 hours, Max. Marks: 50

Section A: Each question is worth 1 mark.

1. Find the number
   $8x10^4 + 6x10^3 + 0x10^2 + 4x10^1 + 5x10^0$
   ……
2. If m= 2 , the value of 3m-5 is …….

3. Fill in the blank:
   3/7 of 4 weeks = …. days

4. Solve for x: x + 5 = - 12

5. What is the coefficient of y in the expression 7xy - 2?

6. Evaluate:-
   $(3^2)^5 \times 3^0$

7. Write $\frac{-18}{24}$ in the simplest form.

8. 4^2 is greater than 2^4(True/ False)

9. The value of 5÷(-1) does not lie between (choose right option)
   (a) 0 and -10 (b) 0 and 10 (c) -4 and -15 (d) -6 and 6

10. What is the value of $(5^0+3^0+6^0)$?

Space for Rough work

Section B: Calculation (14 Marks)

Instructions: Show your work. Each question is worth 2 marks.

11. (I) Write the following statements in the form of algebraic expressions (a, b, c, d, e)

(a) x is multiplied by 4 and then added to the product of x and y.

…….

(b) Three times of p and two times of q are added.

……..

(c) Sum of p, twice of q and thrice of r .

……..

(d) Three times a number subtracted from 56

…….

(e) Perimeter of an equilateral triangle of side x.

…….

(II) Fill in the blanks(f, g, h)

(f) The terms with different algebraic factors are called ……

(g)An expression with two terms is called a……

(h)The number of terms in a monomial is ……

12. Simplify: Express each of the following as a product of their prime factors only in exponential forms.

72 x 192

13. Add additive inverse of $-\frac{4}{5}$ and multiplicative inverse if -15/7.

14. Find the value of the expression $2x^2 + 5x - 3$ when $x = 2$.

15. Solve:

a) 3+2(p-7)=9

b) 2(x-1) =14

c) 3x+17= -4

16. Simplify
(6.3 □ 0.9) x 3 - 10.5

17. Simplify the algebraic expression: (5p + 7q) - (2p - 3q) + (-10p+ 4q)

Section C : Application (16 Marks)

Instructions: Solve the following word problems. Show all steps.

18. An elevator descends into a mine shaft at the rate of 8 m per minute. If the descent starts from 16 m above the ground level how long will it take to reach - 240 m?

OR

In a class test 3 marks are awarded for every correct answer,2 marks are deducted for every incorrect answer and no marks are given for not attempting a question. Upasna scored 20 marks. If she has got 8 correct answers, how many questions has he attempted incorrectly?

19. Alisha goes to a fruit and vegetable shop where the cost per kg of some of the fruits and vegetables is displayed .

Onion	**Potato**	**Radish**	**Apple**	**Mango**
Rs 48	Rs 25	Rs 15	Rs 150	Rs85

Find the total amount Alisha has to pay if purchases are as under:-
1.5 kg onions, 3.5 kg potatoes, 0.5 kg radish and 1.5 kg apples.

20.a. The sum of 3 consecutive multiples of 8 is 312, find the numbers.

b. The teacher tells the class that the highest marks obtained by a student in her class is 15 less than thrice the lowest marks. The highest score is 96 .What is the lowest score?

21. Solve using laws of exponents–

a. $\frac{2^8 \times 4^2 \times 5^3}{16 \times 10^2}$.

b) $\frac{3^5 \times 10^5 \times 25}{5^7 \times 6^5}$

Section - D: Activity (10 Marks)

22.(Case Study) (2 marks)

A young astronomer named Arya is obsessed with the cosmos. She's learning about the distances of celestial bodies and finds the numbers extremely large. She has a book that lists the distance of a star from Earth as **1,49,600,000,000,000,000,000,000** meters. Arya's little brother, Rohan, sees the number and laughs, saying "That's a silly number! It's so long!"

Arya thought of two points:

How can she write this number in a way that is easy to read, write, and understand?

How can she explain to Rohan why this 'silly' long number is actually a very important measurement and how mathematicians handle such large figures?

To solve her dilemma, Arya needs to use the concepts of exponents and standard form.

Arya remembers that an exponent tells you how many times to multiply a base number by itself.

a. The standard form of the distance of the star from the Sun is……..

b. The first non-zero digit from the left is ……

c. Digits to the right of the decimal point are ……,..... and……

23. State following statements as true or false- (HOTS) (2 marks)

If (+) is a friend and(–) is an enemy.

a. Your friend's friend is your friend. ……..

b. Your friend's enemy is your enemy…….

c. Your enemy's friend is your enemy……

d. Your enemy's enemy is your friend ……..

24. Solve the given crossword - (3 marks)

Fill up the given boxes. Clues are given below for across as well as downward filling. Also for across and down clues, a number is written at the corner of the boxes. Answers of clues have to fill up in their respective boxes.

Across 1 : 8/ 9 is a _____ fraction.

Across 2 : In 4/ 5, 5 is the _____

Across 3 : 6/ 10 is _____ to 3/ 5 .

Across 4 : The product of 2 improper fractions is _____ than each of the 2 fractions.

Across 5 : To multiply a mixed fraction to a whole number we first convert the mixed fraction to an _____ fraction then multiply.

Across 6 : Product of a non-zero number with its reciprocal is _____.

Down 1 : _____ of two fractions = Product of numerator

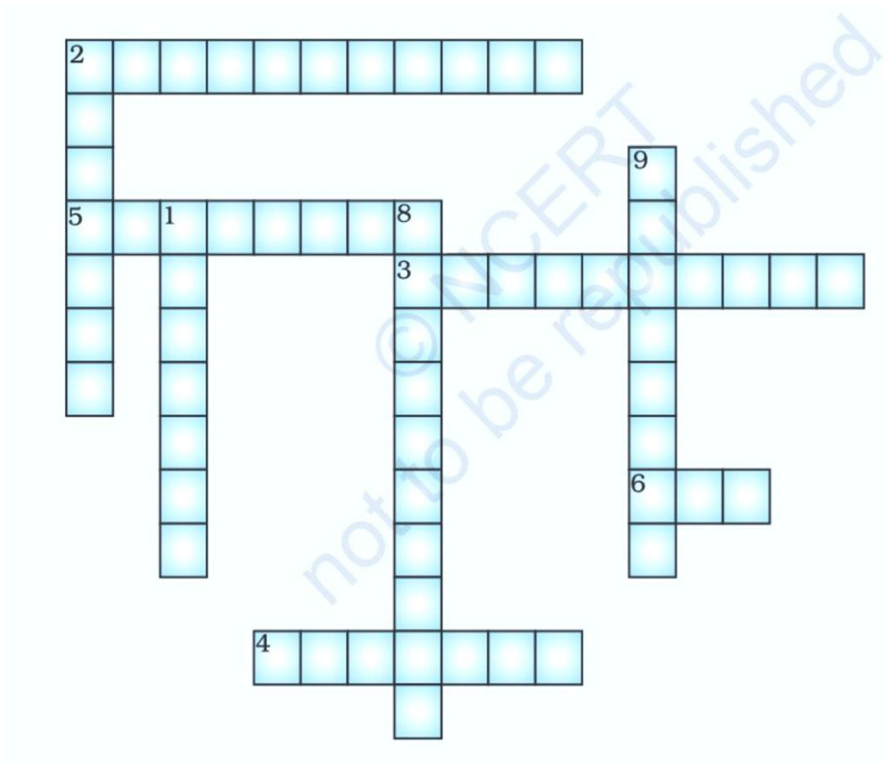
—---

Product of denominator

Down 2 : 6.48 × 100 = 0.648 is wrong because _____ is wrongly placed.

Down 8 : 1/10 is _____10

Down 9 :(–27/ 10) is not a _____.



25. Equations riddle - (HOTS) (2 marks)

. What does a duck do when it flies upside down? The answer to this riddle is hidden in the equation given below:

If i + 69 = 70, then i = ? If $8u = 6u + 8$, then u =?

If $4a = -5a + 45$, then a = ? if $4q + 5 = 17$, then q =?

If $-5t - 60 = -70$, then t = ? If $\frac{1}{4}s + 98 = 100$, then s =?

If $\frac{5}{3}p + 9 = 24$, then p =_____?

If $3c = c + 12$, then c =_____?

If 3 $(k + 1) = 24$, then k =_____?

For riddle answer : substitute the number for the letter it equals

___	___	/ ___	___	___	___	___	___	/ ___	___
1	2	3	4	5	6	7	8	4	9

Space for rough work