DR. M.K.K. ARYA MODEL SCHOOL, PANIPAT

HOLIDAYS HOMEWORK ASSIGNMENT

CLASS – VIII

NOTE: Do this assignment in a separate notebook.

Chapter – 1 (Rational Numbers)

1. Simplify: $\frac{-1}{6} \times \frac{-3}{1} \times \frac{-5}{18} \times \frac{10}{9}$
2. Find using properties: $\frac{2}{5} \times \left(-\frac{3}{7}\right) - \frac{1}{6} \times \frac{3}{2} + \frac{1}{14} \times \frac{2}{5}$
3. Find: $\left(\frac{3}{4} + \frac{-5}{6}\right) + \frac{7}{8}$
4. Find three rational number between $\frac{1}{5}$ and $\frac{2}{3}$.
5. Find 6 rational number between $-\frac{1}{3}$ and $\frac{3}{7}$
6. Divide the sum of $\frac{3}{8}$ and $-\frac{5}{12}$ by the reciprocal of $-\frac{15}{8} \times \frac{16}{27}$
7. Arrange $-\frac{5}{3}, \frac{3}{4}, \frac{5}{-6}$ in ascending order.
8. The product of two numbers is $\frac{5}{9}$. if one of the numbers is $-\frac{35}{24}$. Find the other.
9. Find the product of additive inverse and multiplicative inverse of 7.
10. Express $-\frac{3}{7}$ as a rational number with numerator 21.

Chapter – 2 (Linear Equations in One Variable)

11. Two equal sides of a triangle are 5m less than twice the third side. If the perimeter of the triangle is 55 m, find the lengths of its sides.
12. When $\frac{1}{3}$ is subtracted from a number and the difference is multiplied by 4, the result is 28, find the number.
13. Number of boys and girls in a class are in the ratio 7:5. The number of boys is 8 more than the number of girls. What is the total class strength?
14. Solve and check your answer: $0.5x + 7.5 = 0.25x - 1.5$
15. Solve and check your answer: (i) $3x - \frac{5}{3} = x - 3$ (ii) $8x + 4 = 3(x - 1) + 7$
16. Lakshmi is a cashier in a bank. She has currency notes of denominations Rs 100, Rs 50 and Rs 10 respectively. The ratio of number of these notes is

2:3:5. The total cash with Lakshmi is Rs 400000. How many notes of each denomination does she have?

17. The sum of three consecutive multiples of 11 is 363. Find these multiples.
18. Solve: $\frac{7}{15}x + 3 = \frac{3}{5}$
19. The present age of Ritu's mother is 3 times the present age of Ritu. After 5 years, their ages will add to 66 years. Find their present ages.
20. Fifteen years from now Ravi's age will be 4 times his present age. What is Ravi's present age.

Chapter – 6 (Squares and Square Roots)

21. Write a Pythagorean triplet whose one member is 16.
22. Find the least number that must be subtracted from 1728 to make it a perfect square.
23. Find the smallest number by which 1300 must be divided to get a perfect square. Also, find the square root of the perfect square so obtained.
24. Solve: $\left(\frac{1}{2}\right)^2 + \sqrt{0.25}$
25. A school collected ₹63504 for Prime Minister's Relief Fund. If each student collected as much money as there were students in the school, how many students were there in the school?
26. Find the square root of 390625 by division method.
27. Find the greatest 4-digit number which is a perfect square.
28. Find the length of a square plot, whose area is equal to the area of a rectangular field of dimensions 75 m $\times$ 432 m.
29. Find the least perfect square, which is exactly divisible by each of the numbers 21, 36 and 66.
30. There are 500 children in a school. For a P.T. drill they have to stand in such a manner that the number of rows is equal to the number of columns. How many children would be left out in this arrangement.

Chapter – 7 (Cubes and Cube Roots)

31. Find: $10^3 - 13^2$
32. Find the digit in the unit place of cube of 47.
33. Examine, if 106480 is a perfect cube.
34. Is 53240 a perfect cube? If not, then by which smallest number should it be divided so that the quotient is a perfect cube?

35. Find the smallest number by which 9000 must be multiplied so that the product is a perfect cube. Also, find the corresponding cube root.
36. Find the cube root of 175616.
37. Write cubes of prime numbers from 1 to 30.
38. Parikshit makes a cuboid of sides 5 cm, 2 cm, 5 cm. How many such cuboids will be need to form a cube?

Do worksheet : 1,2,9,10,11 and 12

Activities:

1. **Represent the following on number line**

$(i)\ \frac{3}{5} - \frac{1}{4}$ $(ii)\ \frac{3}{7} \times \frac{49}{9}$ $(iii)\ \frac{5}{6} - \frac{1}{12}$ $(iv)\ \frac{63}{45} \div \frac{7}{9}$

2. **Verify the algebraic identity $(a+b)^2 = a^2 + b^2 + 2ab$**
3. **Show that the sum of the interior angles of a triangle is 180^o.**

Project Work:

1. **Represent squares of the numbers 1 to 30 on a wooden board.**
2. **Represent cubes of the numbers 1 to 15 on a wooden board.**
3. **Types of Triangles on the basis of Angles and Sides.**