

MATHSSECTION – A

(1 X 6 = 6)

- 1) Write as per cent :-
15 : 16
- 2) Convert the percentage into fraction :-
0.62%
- 3) Find the square of :-
995
- 4) Subtract :-
- 6xy from 14xy
- 5) Add :-
3abc, -4abc, 5abc
- 6) Find the sum of the interior angles of a polygon of 9 sides.

SECTION – B

(6 X 2 = 12)

- 1) A polyhedron has 18 vertices and 12 faces. How many edges does it have ?
- 2) Find the area of a parallelogram whose base is 30cm and the corresponding altitude is 5cm.
- 3) Find the surface area of a cube whose edge is 15cm.
- 4) The surface area of a cube is 726 sq.cm. Find its volume.
- 5) A bag contains 3 red and 2 blue marbles. A marble is drawn 'at random'. What is the Probability of drawing a blue marble?
- 6) Factorise :-
 $4x^2 + 9y^2 - 12xy$

SECTION – C

(10 X 3 = 30)

- 1) Saurav's income is 25% more than that of Sunil. What per cent is Sunil's income less than Saurav's income ?
- 2) Meera buys some toffees at the rate of 6 for a rupee and sells them at the rate of 4 for a rupee. Find her gain per cent.
- 3) Compute the compound interest on Rs 12000 for 2 years at 20% per annum, when compounded Half – yearly.
- 4) The surface area of a cube is 726sq.cm. Find its volume.
- 5) A die was thrown 25 times and following scores were obtained.
1, 5, 2, 4, 3, 6, 1, 4, 6, 3, 5, 4, 2, 5, 1, 2, 6, 1, 2, 5, 6, 3, 2, 3, 2, 3, 1
Prepare a frequency distribution table.
- 6) Plot the following points on a graph paper and verify if they lie on a line.
A(4,0), B(4,2), C(4,6), D(4,2.5)
- 7) Construct a quadrilateral GOLD in which OL = 7.5CM, GL = 6cm, GD = 6cm, LD = 5cm
And OD = 10cm.
- 8) Construct a parallelogram HEAR in which HE = 5cm, EA = 6cm and angle R = 85°
- 9) Solve :-
 $(2x + 1) (x + 5) - 8 = 2 (x + 1) (x + 3)$
- 10) Find the value of p, so that x- 3 is a factor of $3x^2 - 11x + p$.

1) A number consists of three digits of which the middle digit is 0. If the digits at the hundreds place and the ones place are interchanged, the number increases by 198. If the hundreds place digit is halved and the tens place digit and ones place digit are, interchanged, the number diminishes by 228. Find the number.

2) Draw a pie chart for the following data of expenditure pattern in a family.

Items	Food	Clothing	Rent	Education	Miscellaneous
Expenditure	4000	2000	1500	1500	1000

3) Draw a histogram to represent the following frequency distribution.

Class intervals	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40
Frequency	6	10	10	8	18	12

4) A scooter dealer allows a discount of 16% on the marked price. However, he still makes a profit of 20% on the cost price. Find the profit he would have made, had he sold the scooter at the marked price.

5) The value of a machine depreciates 20% annually. Its present value is Rs 136000. Find

- i) Its value after 3 years, and
- ii) Its value 3 years ago.

6) The radius and height of a cylinder are in the ratio 7:2. If the volume of the cylinder is 8316cm^3 , find the total surface area of the cylinder.

7) Three numbers are in the ratio 2 : 3 : 4. The sum of their cubes is 0.334125. Find the numbers.

8) Find the product of $(a^2 - 4b^2)$ and $(5a - b)$. Verify the result for $a = -1$ and $b = 2$