

**Paper Prepared by**

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1. Express 0.00000003345 in standard form
2. Solve for x:  $x = \frac{3}{4}(x + 10)$
3. Find measure of each interior angle of a regular polygon of 10 sides.
4. A coin is thrown once. Find probability of getting a head.
5. Write Euler’s formula.
6. A pyramid is named by number of sides in \_\_\_\_\_
7. Write number/s which is/are equal to its/their multiplicative inverse.
8. Find x:  $(-2)^{x-3} \times (-2)^5 = (-2)^{32}$
9. Factorise  $x^3 - xy^2$
10. Diagonals are equal in a square, rhombus and \_\_\_\_\_.

**Section B 2 marks each**

11. Find the smallest square number which is divisible by each of the numbers 6, 9 and 21.
12. Find the cube root of 175616.
13. Find number of faces in a polyhedron if it has 6 vertices and 12 edges.

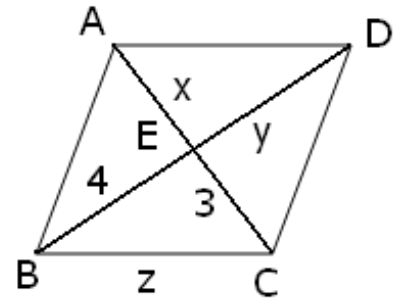
14. Simplify using properties  $\frac{-3}{5} \times \frac{2}{7} + \frac{3}{5} \times \frac{4}{7}$
15. Show that  $(2x + 7)^2 - 56x = (2x - 7)^2$ .

**Section C 3 marks each**

16. Is 53240 a perfect a cube? If not, find the smallest whole number by which it should be multiplied to make product a perfect cube.
17. The list price of a book is Rs 250. Find its sale price after a discount of 20%. Also find the discount.
18. Find compound interest on Rs 40000 for 1 year 3 months at  $8\frac{1}{2}$  % per annum compounded annually.

19. Factorise and divide  $39z^3(50z^2 - 98)$  by  $26z^3(5z + 7)$

20. ABCD id a rhombus, AE = x, DE = y, CE = 3, BE = 4. Find z.



21. 42 machines are required for 63 days to produce a certain number of monitors. Find number of machines required to produce same number of articles in 9 days.
22. Draw graph for the following data. Is it a linear graph.

x	1	2	3	4	5	6
y	1	4	9	16	25	36

23. Find A and B.

$$\begin{array}{r} B \ A \\ \times B \ 3 \\ \hline 5 \ 7 \ A \end{array}$$

24. Represent on number line  $\frac{-3}{5}$

25. Solve for x,  $x - \frac{x-1}{3} = 1 - \frac{x-2}{5}$

Section D 6 marks each

26. Draw a pie chart for the following data

Item	A	B	C	D	E	F
Value (in Rs)	640	240	320	160	40	40

27. Construct a quadrilateral PQRS in which  $PQ = 4\text{cm}$ ,  $QR = 5\text{cm}$ ,  $RS = 5.5\text{cm}$ ,  $\angle Q = 75^\circ$  and  $\angle R = 135^\circ$
28. A rectangular piece of paper  $11\text{ cm} \times 10\text{ cm}$  is folded without overlapping to make a cylinder of height  $10\text{ cm}$ . Find the volume of the cylinder. Also find volume of cylinder of height  $11\text{ cm}$  formed from same sheet.
29. Anubhav has a total of Rs 590 as currency notes in the denominations of Rs 50, Rs 20 and Rs 10. The ratio of the number of Rs 50 notes and Rs 20 notes is 3:5. If she has a total of 25 notes, how many notes of each denomination she has?
30. A person sells two cows are sold for Rs 9900 each. He suffers a loss of 10% on one and a profit of 10% on other. Find overall loss or gain percent.

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