

SAINIK SCHOOL AMBIKAPUR
CHHATTISGARH
WINTER VACATION HOMEWORK (2022-23)

Class XI

Subject: Mathematics

Class	Subject : Maths	Teacher : Raj Kumar
Ser	Items	Details
1.	Syllabus for PA - III	i) Straight Lines ii) Introduction to Three Dimensional Geometry (3-D) iii) Limits and Derivatives
2.	Revision Homework / Assignment	Solve :- Miscellaneous Exercise of NCERT BOOK (i) Straight Lines (ii) Introduction to Three Dimensional Geometry (3-D) (iii) Limits and Derivatives Solve MCQ of R.D Sharma i. Sets ii. Relation and Functions iii. Trigonometry iv. Complex Number v. Quadratic Equations vi. Binomial Theorem
3.	Subject Capacity Building Assignment	Activity : (i) To verify the relation between the degree measure and the radian measure of an angle. (ii) To construct different types of conic sections. (iii) To construct a parabola. (iv) To explain the concept of octants by three mutually perpendicular planes in space. (v) Verification of the geometrical significance of derivative. (vi) To construct a Pascal's Triangle and to write binomial expansion for a given positive integral exponent. (vii) To demonstrate that the Arithmetic mean of two different positive numbers is always greater than the Geometric mean. (viii) To find the values of sine and cosine functions in second, third and fourth quadrants using their given values in first quadrant. (ix) To prepare a model to illustrate the values of sine function and cosine function for different angles which are multiples of $\pi/2$ and π . (x) To verify distributive law for three given non-empty sets A, B and C, that is, $A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$
4.	Preparatory Work for Units/ Chapters to be covered after	Conic Section

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