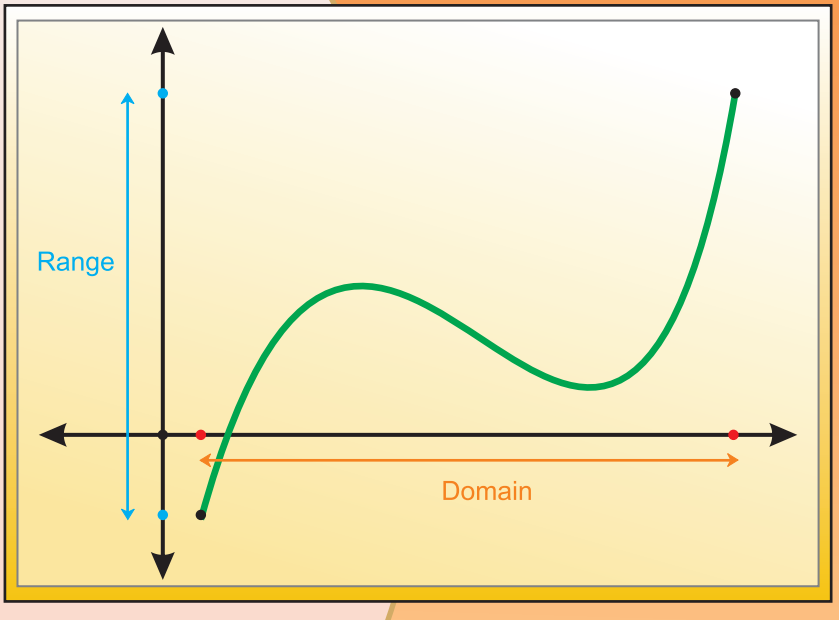
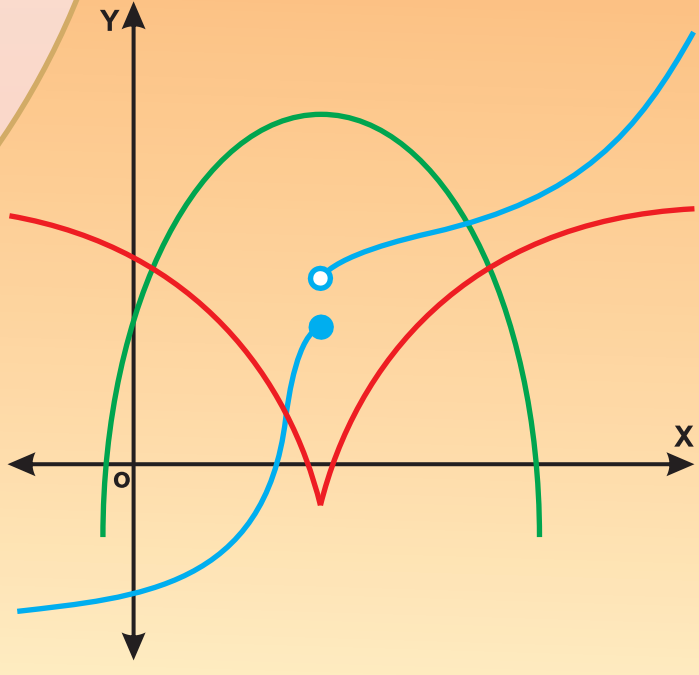
Standard XI

Mathematics & Statistics

(Arts & Science) Part 2





The Coordination Committee formed by GR No. Abhyas - 2116/(Pra.Kra.43/16) SD - 4 Dated 25.4.2016 has given approval to prescribe this textbook in its meeting held on 20.06.2019 and it has been decided to implement it from the educational year 2019-20.

Mathematics and Statistics

(Arts and Science)

Part - 2

STANDARD - XI

Maharashtra State Bureau of Textbook Production and Curriculum Research, Pune - 411 004

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Mathematics and Statistics Std XI (Part II) Arts and Science			
Sr. No	**Area**	**Topic**	**Competency Statement**
1	Complex Numbers	Complex Numbers	The students will be able to - • understand set of complex numbers and different ways of expressing complex numbers. • perform algebraic operations on complex numbers. • simplify algebraic expressions involving complex numbers.
2	Sequences and Series	Sequences and Series	• Revise AP, learn GP and HP. • Find the general term and the sum of the first n terms of these sequences.
3	Permutations and combinations	Permutations, Combinations	• count the number of arrangements of given objects satisfying specific conditions. • count the number of possible selections of objects with certain conditions.
4	Method of Induction and Binomial theorem	Method of Induction	• understand the method of induction and apply it to verify mathematical statements.
		Binomial Theorem	• expand binomial expressions and find its general term. • simplify the binomial expression for negative index or fractional power.
5	Sets and Relations	Sets	• work with sets and operations on sets. • construct sets from given conditions. • solve problems on applications of set theory.
		Relations	• identify the types of relations. • study equivalence relations.

6	Functions	Functions	• work with function defined on different domains. • identify different types of functions. • carry out algebraic operations on functions.
7	Limits	Limits	• understand the concept of limit of a function. • determine the limits of functions if they exist.
8	Continuity	Continuity	• Define and study the continuity of a function at a point and in an interval.
9	Differentiation	Differentiation	• understand and study the differentiability of a function. • understand and study differentiation of various functions.

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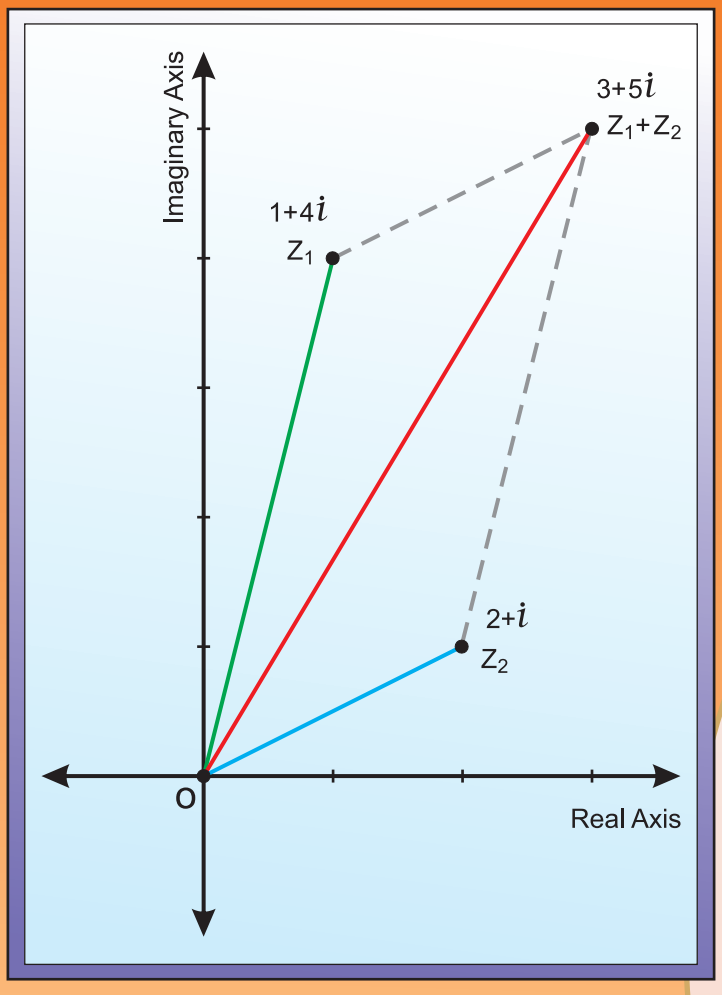

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