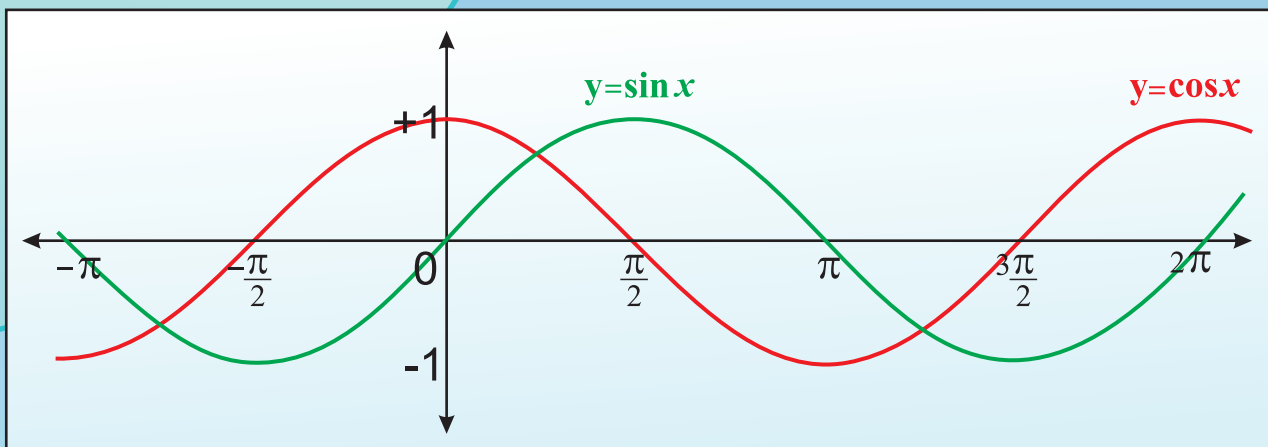
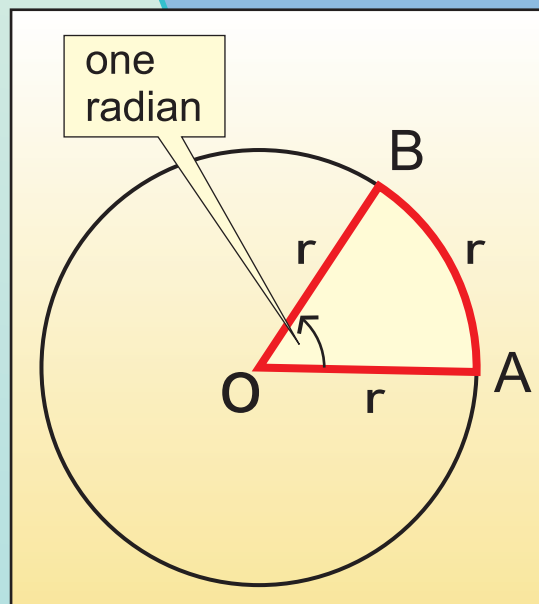


Standard XI

# Mathematics & Statistics

(Arts & Science) Part 1



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 - I

#### STANDARD - XI



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



**T5X2F1**

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## XI Mathematics and Statistics (Part I) for Arts and Science

Sr. No	Area	Topic	Competency Statement
1	Angle and Its measurement	Angle	<p>The student will be able to -</p> <ul style="list-style-type: none"> <li>• understand angle of any measure.</li> <li>• understand different systems of measurement of angle and relations between them.</li> <li>• convert an angle from one system to the other.</li> </ul>
2	Trigonometric Functions	Trigonometric Functions	<ul style="list-style-type: none"> <li>• understand definitions of trigonometric functions of angle of any measure.</li> <li>• find the values of trigonometric functions of certain angles.</li> <li>• draw graphs of trigonometric functions.</li> </ul>
3	Trigonometric Functions of compound angles and factorization formulae	Trigonometric Functions of compound angles	<ul style="list-style-type: none"> <li>• find the trigonometric functions of sum or difference of the angles.</li> <li>• find the trigonometric functions of multiple and sub-multiple angles.</li> <li>• express the sum or difference of two trigonometric functions as product</li> <li>• learn some rules of trigonometric ratios of angles of a triangle.</li> </ul>
4	Determinants and Matrices	Determinant	<ul style="list-style-type: none"> <li>• find value of a determinant.</li> <li>• reduce determinant to simple form.</li> <li>• solve linear equations in 2 or 3 variables</li> <li>• find area of triangle using determinants.</li> </ul>
		Matrices	<ul style="list-style-type: none"> <li>• understand types of matrices.</li> <li>• Perform algebraic operations of the matrices.</li> </ul>

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$$\begin{bmatrix} 1 & 0 & 4 \\ -2 & 1 & 3 \end{bmatrix} \times \begin{bmatrix} 3 & 1 & 0 \\ -2 & 0 & 5 \\ 4 & 3 & -1 \end{bmatrix} = \begin{bmatrix} 19 & 13 & -4 \\ 4 & 7 & 2 \end{bmatrix}$$



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