

**ARMY PUBLIC SCHOOL, MUMBAI (2019-2020)**  
**STANDARD CURRICULUM**

**CLASS: XI**

**SUB: MATHEMATICS**

<b><u>S. NO</u></b>	<b><u>MONTH</u></b>	<b><u>CHAPTER NAME</u></b>	<b><u>CORE VALUES / VALUES AND SKILLS</u></b>	<b><u>METHODOLOGY</u></b>	<b><u>LEARNING OUTCOMES</u></b>
1.	June	Sets, relations and functions	<ul style="list-style-type: none"> <li>• Self awareness</li> <li>• Confidence and motivation</li> </ul>	<ul style="list-style-type: none"> <li>• Discussion of sets and relation function in our lives</li> </ul>	Students were able to: <ul style="list-style-type: none"> <li>• state the difference between relation and function</li> <li>• Define sets and describe types of sets</li> </ul>
2.	July	Trigonometric functions, principle of mathematical induction	<ul style="list-style-type: none"> <li>• Team work</li> <li>• Courage</li> </ul>	<ul style="list-style-type: none"> <li>• Group discussion on real life use of trigonometry</li> </ul>	<ul style="list-style-type: none"> <li>• Solve trigonometric problems by using different formulae and identities</li> <li>• Find principle and general solution</li> <li>• Solve problems based on PMI</li> </ul>
3.	August	Complex numbers, quadratic equations, linear inequalities	<ul style="list-style-type: none"> <li>• Environmental awareness</li> <li>• Understanding</li> </ul>	<ul style="list-style-type: none"> <li>• Explanation on need of complex numbers</li> </ul>	<ul style="list-style-type: none"> <li>• Find conjugate, multiplicative inverse</li> <li>• Represent equation in polar form</li> <li>• Represent inequalities graphically</li> </ul>
4.	September	Permutations and combinations binomial theorem	<ul style="list-style-type: none"> <li>• Patriotism and nationalism</li> <li>• Loyalty, honesty and bravery</li> </ul>	<ul style="list-style-type: none"> <li>• Problem solving on permutation and combinations based on different situations</li> </ul>	<ul style="list-style-type: none"> <li>• State the difference between permutation and combination</li> <li>• Solve word problems based on both</li> </ul>

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5.	October	Sequence and series ,straight line	<ul style="list-style-type: none"> <li>• Discipline and diligence</li> <li>• Hard work and sincerity</li> </ul>	<ul style="list-style-type: none"> <li>• Explanation on difference between sequence and series and properties of straight lines</li> </ul>	<ul style="list-style-type: none"> <li>• State difference between sequence and series</li> <li>• Recall AP and explain GP and relation between them</li> <li>• Define different forms of general equation of straight lines and formulae</li> </ul>
6.	November	Conic sections, introduction to three dimensional geometry, limits and derivatives	<ul style="list-style-type: none"> <li>• Diversity and togetherness</li> <li>• Unity and teamwork</li> </ul>	<ul style="list-style-type: none"> <li>• Explanation on deep understanding of different shapes of conic</li> <li>• Section with figures drawn</li> </ul>	<ul style="list-style-type: none"> <li>• Define 4cases of conic section i.e circle, parabola, ellipse, hyperbola</li> <li>• Explain concept of limit and solve problems based on that</li> <li>• Solve problems of derivatives using formulae</li> </ul>
7.	December	Limits and derivatives (contd) mathematical reasoning	<ul style="list-style-type: none"> <li>• Gender sensitivity</li> <li>• Respect</li> </ul>	<ul style="list-style-type: none"> <li>• Explanation cum discussion on limits use</li> </ul>	<ul style="list-style-type: none"> <li>• Solve problems using Leibnitz product rule and quotient rule</li> </ul>
8.	January	Statistics, probability	<ul style="list-style-type: none"> <li>• Perseverance</li> <li>• Patience and faith</li> </ul>	<ul style="list-style-type: none"> <li>• HOTS question solving on statistics and assignment on probability</li> </ul>	<ul style="list-style-type: none"> <li>• Find mean deviation about mean and median of ungrouped data, discrete data and continuous data</li> </ul>