



MAHARAJA AGARSAIN PUBLIC SCHOOL
a Cambridge International School
Ashok Vihar, Delhi

CLASS -XI
SUBJECT-MATH
SESSION-2022-2023

DURATION	SYLLABUS COVERED	SYLLABUS TESTED	SUBJECT ENRICHMENT/PRACTICAL / ENGLISH/ CONVERSATION/ VISUAL STIMULUS	LEARNING OUTCOMES	RESOURCES	SDG
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PT1 (APRIL-MAY) 15%-20% 15-05-2023	Sets	<ul style="list-style-type: none"> • SETS • RELATIONS AND FUNCTIONS • TRIGONOMETRY 	To find the number of subsets of a given set and verify that if a set has n number of elements, then the total number of subsets is 2^n .	SWBAT To apply the concept to problems. To describe a problem pictorially using venn diagrams	https://www.youtube.com/watch?v=I3-A0042Ly0&t=40s&ab_channel=Don%27tMemorise sets	No poverty SDG 1
	Relations & Functions		To verify that for two sets A and B , $n(A \times B) = pq$ and the total number of relations from A to B is 2^{pq} , where $n(A) = p$ and $n(B) = q$.	To find domain and codomain of functions	https://www.youtube.com/watch?v=_9Wvu-R04go&ab_channel=Don%27tMemorise subsets	Zero Hunger SDG 2
	Trigonometric Functions		To find the values of sine and cosine functions in second, third and fourth quadrants using their given values in first quadrant.	SWBAT To solve problems on radian and degree measure of angles, To able to use identities in solving problems	https://www.youtube.com/watch?v=H8o206G870s&ab_channel=Don%27tMemorise TRIGONOMETRY	Quality Education SDG4

<p>TERM1(JUNE-JULY) (35%-40%)</p>	<p>Complex Numbers and Quadratic Equations</p>	<ul style="list-style-type: none"> • SETS • RELATIONS AND FUNCTIONS • TRIGONOMETRY • COMPLEX NUMBERS • LINEAR INEQUALITIES 	<p>To demonstrate that the Arithmetic mean of two different positive numbers is always greater than the Geometric mean.</p>	<p>To solve problems on complex numbers</p>	<p>https://www.youtube.com/watch?v=bmsapLZM2Uo</p>	<p>Good health and well being SDG 3</p>
<p>PT2(JULY-AUG) 15%-20% 7-8-2023</p>	<p>Linear Inequalities</p>	<ul style="list-style-type: none"> • Permutations and combinations • Sequences and Series 	<p>To verify that the graph of a given inequality, say $5x + 4y - 40 < 0$, of the form $ax + by + c < 0$, $a, b > 0$, $c < 0$ represents only one of the two half planes.</p>	<p>To find graphical solutions to system of equations</p>	<p>https://www.youtube.com/watch?v=e_tY6X5PwWw&ab_channel=Cognito inequalities</p>	<p>Quality Education SDG4</p>
	<p>Permutations and Combinations</p>			<p>To find the number of ways in which a particular combination or arrangement can be done.</p>	<p>https://www.youtube.com/watch?v=0NAASciUm4k&ab_channel=Don%27tMemorise</p>	
	<p>Binomial Theorem</p>			<p>To find expansion of binomial, general and middle terms.</p>		
	<p>Sequence and Series</p>			<p>To determine general term of series in AP and GP, Calculate sum of n terms of series</p>	<p>https://www.youtube.com/watch?v=KFsfyg0t70s&ab_channel=Don%27tMemorise</p>	

HALF YEARLY (SEP) (60%-70%)		<ul style="list-style-type: none">• Sets• Relations & Functions• Trigonometric Functions• Complex Numbers and Quadratic Equations• Linear inequalities• Permutaions and combinations • Binomial Theorem• Sequences and series				

<p>PT3 (NOV-DEC) (15%-20%) 4-12-2023</p>	<p>Straight Lines</p> <p>Conic Sections</p> <p>Introduction to Three-dimensional Geometry</p> <p>Limits and Derivatives</p>	<p>Limits and derivative</p> <p>Introduction to three dimension</p>	<p>To verify that the equation of a line passing through the point of intersection of two lines $a_1 x + b_1 y + c_1 = 0$ and $a_2 x + b_2 y + c_2 = 0$ is of the form $(a_1 x + b_1 y + c_1) + \lambda (a_2 x + b_2 y + c_2) = 0$.</p>	<p>.To find Slope of line, Calculate angle between 2 line, To use various forms of equation of line. To calculate distance between 2 parallel lines.</p> <p>To find equation of circle in various forms. To understand the geometry of conic sections. To find equation of parabola, ellipse, hyperbola. To apply the knowledge of conic section.</p> <p>To find the distance between any two points in space To calculate derivatives using first principle, To use various rules for finding derivatives,</p>		<p>Gender Equality SDG5</p>
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	Statistics Probability			<p>To find mean, mean deviation about about MEANmean and median, To find variance and standard deviation, To find coefficient of variation and analyze the data</p> <p>To find sample space, To identify between Exhaustive events and mutually exclusive events, To find probability of an event for simple problems.</p>		
	Probability					

PRE FINAL (JAN)		<ul style="list-style-type: none">• Sets• Relations & Functions• Trigonometric Functions• Complex Numbers and Quadratic Equations• Linear inequalities• Permutations and Combinations• Binomial Theorem• Sequence and Series• Straight Lines• Conic Sections• Introduction to Three dimensional Geometry• Limits and derivatives • Statistics• Probability				Clean water and sanitation SDG6
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FINAL TERM (FEB)		<ul style="list-style-type: none">• Sets• Relations & Functions• Trigonometric Functions• Complex Numbers and Quadratic Equations• Linear inequalities• Permutations and Combinations• Binomial Theorem• Sequence and Series• Straight Lines• Conic Sections• Introduction to Three dimensional Geometry• Limits and derivatives • Statistics• Probability				
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