

The City School

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| **Term 1** | | |
| **Unit** | **Topic** |
| Variations | • Direct Variation  • Inverse Variation |
| Algebraic equations & Fractions | Algebraic representation and formulae   Algebraic manipulation |
| Indices |  Rules of Indices   Different types of indices |
| Pythagoras  Theorem | Pythagoras theorem |
| Trigonometric  Ratios | • Trigonometric Ratios  • Apply the sine, cosine and tangent ratios for acute angles to calculate:  o an angle  o a sides of a right angle triangle  • Practical application of  trigonometry |
| Mensuration (A) | **Length of arc and area of Sector**  • area and circumference of a circle  • area and perimeter of shaded regions  • arc length  • area of sector  • word problems |
| Mensuration (B) | Volume and surface area of:  • a pyramid  • a cone  • a sphere  • compound shapes |

**North Nazimabad Boys Campus**

**Consolidated Syllabus for EOY 2018 - 19**

**Mathematics**

**Class – 9**

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| **Syllabus For MATH Class 9**  **Class: 9 Subject: Mathematics 4024** | | |
| **Unit** | **Topic** |
| Personal and small business finance | * **Percentages** * Discount * Profit and loss * Taxation * Personal and Household finance * Simple interest& Compound interest * Hire purchase * Commission * Money |
| Solutions of equations and inequalities | * **Solution to quadratic equations** * Factorization * Completing the square * Using the quadratic formula * Problems involving quadratic equations * **Linear inequalities in one variable** |
| Coordinate geometry | * Length of segment * Mid-point * Gradient of a straight line * Equation of a straight line * Equation of parallel lines * Gradient of parallel and perpendicular lines |
| Symmetry | * Plane and rotational Symmetry * Planes of symmetry * Axes of rotational symmetry * Order of rotational symmetry |
| Similarity and Congruence | * Congruent and similar triangles * Similarity tests * Area and volume of similar figures and solids |
| Geometrical constructions | * Scale drawings |
| Statistics | * Categorical * Numerical and * Grouped data |
| Statistical diagrams | * Frequency Polygon * Histograms with equal and unequal intervals * scatter diagrams |