REGENTS PARK
Community College

Regents Park Community College – Year 10 Progress Pathway Descriptors Maths		
Low Attaining Year 10 student	**Middle Attaining Year 10 student**	**High Attaining Year 10 student**
In Number: I can recall index laws. I can recall rules of fractions and decimals. I can recall inequality symbols I can convert a simple fraction to a recurring decimal. I can write an integer as a product of its prime factors. I can calculate the Lowest Common Multiple (LCM) & Highest Common Factor (HCF). I can write, simplify and divide a ratio given situations. I can share an amount in a given ratio I can convert between currencies.	In Number: I can solve complex problems involving index laws. I can evaluate numbers with positive, fractional and negative indices. I can rationalise simple fractions with a surd as the denominator I can determine whether a fraction can be expressed as a recurring or terminating decimal. I can calculate the upper and lower bounds of a number to a given degree of accuracy I can use upper and lower bounds for addition and	In Number: I can solve and calculate the value of complex indices including surds. I can rationalise more complex denominators. I can understand and use rational and irrational numbers. I can set up, solve and interpret the answers in growth and decay problems. I can plot and interpret exponential functions (y=kx) for positive values of k.
In Algebra: I can recall expanding single and double brackets. I can set up and solve linear equations. I can identify linear and quadratic graphs. I can solve simple quadratics by factorising. I can solve and simplify simple algebraic fractions. I can solve simultaneous linear equations.	In Algebra: I can identify linear, quadratic, cubic, reciprocal and exponential graphs. I can calculate inputs and outputs from function machines, including negatives. I can solve and simplify algebraic fractions. I can construct and solve simultaneous linear equations. I can rearrange formulae with same variable on both sides I can solve Quadratics graphically, using the formula, factorising and including completing the square. I can recognise the difference of two squares. I can calculate the equation of a line given two points. I can solve inequalities algebraically. I can solve problems involving inverse and direct proportion including squares and square roots.	In Algebra: I can use iterative processes to generate sequences I can use iterative methods to calculate solutions. I can multiply three binomials e.g.(x+5)(x-7)(x+2) I can calculate the equations of a perpendicular line. I can solve inequalities graphically. I can calculate the Nth term of a quadratic and geometric sequence. I can solve simultaneous equations with one linear and one quadratic function. I can factorise quadratic expressions of the form ax2 +bx+c (including where a>1)

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Low Attaining Year 10 student	**Middle Attaining Year 10 student**	**High Attaining Year 10 student**
In Geometry: I can transform and describe rotations, translations and reflections I can enlarge any shape given a positive scale factor I can calculate and solve column vector problems. I can calculate the number of sides on a regular polygon given the interior and exterior angles. I can identify and calculate angles in parallel lines e.g.: alternate, corresponding & co-interior I can calculate angles in isosceles and equilateral triangles I can use the scale of a map and work with bearings I can recall 2D pythagoras	In Geometry: I can describe fully a single transformation. I can describe the changes and invariance achieved by transformations. I can calculate and solve vector problems involving ratio. I can recall and use the formulae for volume and surface area for pyramids, frustums and cones. I can calculate the dimensions given the volume or surface area I can use and apply Pythagoras in 3D situations e.g.: diagonal lengths in cuboid and lengths of lines given 3D coordinates. I can use graphs to solve problems involving distance, speed and acceleration. I can use and apply trigonometry to right-angled triangle, including worded problems. I can use and apply all circle theorems.	In Geometry: I can carry out and describe combined transformations including using fraction and negative scale factors. I can use constructions to solve loci problems. I can recall / use the formulae for volume and surface area for pyramids, frustums and cones. I can calculate the dimensions given the volume or surface area. I can identify trigonometric graphs
In Data: I can understand what is meant by simple random and bias sampling. I can understand what makes a questionnaire good I can understand that the sum of probabilities of all mutually exclusive outcomes is 1 I can list all outcomes systematically I can draw sample space diagrams for two events I can add simple probabilities I can plot a time-series graph	In Data: I can use a two-way table to calculate conditional probability. I can calculate a missing probability from a list or two-way table. I can compare relative frequency and theoretical probabilities including from different sample sizes. I can work out probabilities from Venn diagrams to represent real -life situations and also ‘abstract’ sets of numbers/values.	In Data: I can use a Venn diagram to calculate conditional probability. I can understand the structure of a stratified sample and calculate the proportion.

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Regents Park Community College – Year 11 Progress Pathway Descriptors Maths		
Low Attaining Year 11 student	**Middle Attaining Year 11 student**	**High Attaining Year 11 student**
In Number: I can recall index laws. I can recall rules of fractions and decimals. I can recall inequality symbols I can convert a simple fraction to a recurring decimal. I can write an integer as a product of its prime factors. I can calculate the Lowest Common Multiple (LCM) & Highest Common Factor (HCF). I can write, simplify and divide a ratio given situations. I can share an amount in a given ratio I can convert between currencies.	In Number: I can solve complex problems involving index laws. I can evaluate numbers with positive, fractional and negative indices. I can rationalise simple fractions with a surd as the denominator I can determine whether a fraction can be expressed as a recurring or terminating decimal. I can solve problems involving inverse and direct proportion including squares and square roots.	In Number: I can solve and calculate the value of complex indices including surds. I can rationalise more complex denominators. I can understand and use rational and irrational numbers. I can set up, solve and interpret the answers in growth and decay problems. I can plot and interpret exponential functions (y=kx) for positive values of k.
In Algebra: I can recall expanding single and double brackets. I can set up and solve linear equations. I can identify linear and quadratic graphs. I can solve simple quadratics by factorising. I can solve and simplify simple algebraic fractions. I can solve simultaneous linear equations.	In Algebra: I can solve Quadratics using the formula, factorising and including completing the square I can recognise the difference of two squares. e.g.: explain why (n+1) (n+20) is an even number. I can solve inequalities algebraically and graphically. I can calculate the acceleration and distance from velocity-time graphs. I can form algebraic expression to prove given statements.	In Algebra: I can use the equation of a circle to find points of intersection with a line. I can calculate the equation of a circle given the centre and a point on the circumference. I can calculate the equation of a tangent to a circle at a given point. I can calculate the equation of a line given two points and the equations of a perpendicular line I can estimate area under a quadratic or other graph by dividing it into trapezia. I can calculate the inverse function and construct and use composite functions e.g.: f(x) =5x and g(x) =x^2+3. Write down the value of f(5) I can write down the inverse of g(x) I can write down the composite function of fg(x) I can identify and sketch translations of a given graph, or the graph of a given equation.

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Regents Park Community College – Year 11 Progress Pathway Descriptors Maths		
Low Attaining Year 11 student	**Middle Attaining Year 11 student**	**High Attaining Year 11 student**
In Geometry: I can transform and describe rotations, translations and reflections I can enlarge any shape given a positive scale factor I can calculate and solve vector problems. I can calculate the number of sides on a regular polygon given the interior and exterior angles. I can identify and calculate angles in parallel lines e.g.: alternate, corresponding & co-interior I can calculate angles in isosceles and equilateral triangles I can use the scale of a map and work with bearings I can recall 2D pythagoras	In Geometry: I can transform shapes by reflecting, rotating, enlarging and translating (using column vectors) I can use constructions to solve loci problems. I can recall / use the formulae for volume and surface area for pyramids, frustums and cones. I can calculate the dimensions given the volume or surface area. I can identify trigonometric graphs	In Geometry: I can use algebra to prove circle theorem geometry. I can use ratio in similar shapes, lengths, area and volumes. I can use advanced trigonometry to find missing sides and angles and link t with other topics such as bearings. I can use Pythagoras and trigonometry in 3D I can use vector notation in vector proofs
In Data: I can understand what is meant by simple random and bias sampling. I can understand what makes a questionnaire good I can understand that the sum of probabilities of all mutually exclusive outcomes is 1 I can list all outcomes systematically I can draw sample space diagrams for two events I can add simple probabilities I can plot a time-series graph.	In Data: I can construct probability tress including the use of algebra. I can construct a Venn diagram to classify outcomes and calculate probabilities. I can use set notation to describe a set of numbers or objects. I can plot and interpret cumulative frequency graphs. I can plot and interpret boxplots. I can construct and interpret histograms.	In Data: I can use a Venn diagram to calculate conditional probability. I can calculate conditional probability involving the use of algebra. I can understand the structure of a stratified sample and calculate the proportion.