Levenshulme High School – Curriculum Map – Maths

		Term 1		Term 2		Term 3	
Year 9 Higher	**Topic Title and NC link**	**A8, A9, A10, A11, A12, A16, G8, A1, A4, A13, R9**	**G10, G11, G15, G9, G13**	**G13, G9, G1, G2, G16, G6, G4**	**A5, A6, A7, A10, G14, G13, G1**	**G8, G1, A11, S3, N3, G14**	**S1, S2, P1, P2, P3, P4**
	Pupils should know…	• How to find missing points in shapes • How to find midpoints of lines • How to plot linear graphs including horizontal and vertical • How to identify gradient and intercept • How to give the equation of a line. • How to reflect in horizontal, vertical and diagonal mirror lines • Identify mirror lines and equations • What invariant means • What the nth term is	• What is a quadratic expression • Expand two brackets • Expand more than two brackets • Factorise a quadratic expression in different forms • The conventions for labelling angles, sides and lines • How to identify alternate, co-interior and corresponding angles • What plan and elevation means	• What surface area means • How to find the surface area of basic 3D shapes • What does enlargement mean • How to identify if a shape has been enlarged • How to enlarge a shape with whole number and fractional scale factors • How to enlarge from a centre • How to find the centre of enlargement • The meaning of similarity and congruence • How to prove shapes are similar or congruent • Difference between proof	• How to solve equations with variables on both sides • How to solve equations with fractions • Rearranging simple equations • Understand what the hypotenuse is • Know Pythagoras' theorem and be able to apply it to a question • How to calculate the area of a cuboid • What is cross sectional area • What is the formula for volume of a prism, pyramid, cone, sphere.	• What translation means • What a vector is and how it is written • What a translation looks like • What rotation is • What rotation looks like • How to describe a transformation • How to use the product rule for counting • How to calculate the equation of parallel and perpendicular lines • What is a scatter graph and what is it used for • What is a line of best fit • How to read information from a scatter graph • Know and use the terms positive and	• How to find averages from lists • Understand what range measures • Know why you can only estimate the mean from grouped data • What are quartiles • What is the interquartile range and what does it tell us • Understand what sampling is and what types of sampling can be used • What is a recurring decimal • What is probability • What is the probability scale

		• How to recognise special sequences • How to recognise if amounts are in proportion • Use multipliers for a variety of problems in different contexts		and demonstration • How to find the area of a sector • How to solve problems to find what fraction of a circle you have	• How to find the volume of cubes, cuboids and triangular prisms	negative correlation • Understand what is meant by relationship • Understand the terms interpolation and extrapolation • In trigonometry corresponding sides are proportional • Understand relationships of gradients of parallel and perpendicular graphs	• How to calculate a probability
	Pupils should be able to do…	• Plot linear graphs • Interpret linear graphs • Fill in missing co-ordinates on a table. • Identify whether a co-ordinate is on a given line from the equation • reflect in horizontal, vertical and diagonal mirror lines	• Expand and factorise quadratic expressions • Identify subtracting the squares • Use Wendy's way to factorise harder quadratic expressions • Find missing angles in parallel lines • Solve more complex angle problems • Draw the plan and elevations of a 3D shape	• Enlarge a shape with and without a centre • Describe an enlargement • To find the surface area of basic 3D shapes • Calculate the areas of a sector • Find missing information from similar shapes • Prove that shapes are congruent	• Able to solve equations where the coefficient of x is a fraction • Able to rearrange equations including formulas • Find the missing hypotenuse of a right-angled triangle • Find one of the other missing sides of a right-angled triangle	• To be able to translate a shape with worded instructions • To translate a shape using a given vector • To describe fully a translation • To be able to rotate a shape, including with a given number of degrees, direction and centre of rotation • To describe fully a rotation	• Calculate estimated mean from grouped data • Calculate the quartiles from data and find the interquartile range • Compare data • Comment and sampling • To be able to convert a recurring decimal to a fraction • State the chance of an

		• Identify mirror lines and equations • Identify invariant points • Find the nth term of a linear sequence and generate terms using the nth term • Decide if a term belongs to a specified sequence • Problem solve with multipliers	• Interpret plans and elevations	• Calculate the areas of sectors and composite shapes • Problem solve with sectors	• Solve problems using Pythagoras' theorem • Apply Pythagoras' theorem to 3D problems • How to apply knowledge of area of circles to finding volume • How to apply the knowledge of volume to problem solving questions	• Answer problems using prime factor lists • Recognise square numbers from their prime factor list • Use the product rule for counting • Solve problems using the product rule • Draw a scatter graph from a set of data • Draw a line of best fit • Describe the correlation • Describe the relationship • Read values from a scatter graph and make predictions using a line of best fit and interpolation and extrapolation • • To be able to calculate the volumes of cuboids, simple prisms, prism given the cross-sectional area, and shapes made up of cuboids	event happening • Calculate a probability given some data • Answer problems on probability include chance of something not happening • Show a probability on a numberline

						• To calculate the volumes of pyramids, cones and spheres • To solve problems with area and calculate missing dimensions using inverse calculations • Label a triangle • Know the trig ratios • Use the ratios to find unknown lengths • Use the ratios to find unknown angles • Find the equation of a line parallel to another • Find the equation of a line perpendicular to another	
	Pupils should have remembered…	• How to read and plot co-ordinates • How to substitute • How to identify the pattern of a sequence and	• How to simplify algebra • How to multiply out a single bracket • How to factorise a single bracket	• Use multipliers to find scale factors • Plot and read co-ordinates • Inverse operations • How to find the area of 2D	• How to solve simple linear equations • Fractions of amounts • Simplifying fractions • Properties of triangles	• How to plot and read coordinates in all four quadrants • The terms clockwise and anti-clockwise • What factors and multiples mean	• Know and calculate mean, mode, median, and range for a set of data or a table of data • How to convert a terminating

		use function machine to generate terms • What symmetry means • How to use tracing paper • How to write and simplify a ratio • What a reciprocal is • How to share using a ratio	• How to recognise the LCM and HCF • Basic angle facts • Key words for angles • Names of shapes • 3D shape properties	shapes and compound shapes. • How to find the area of circles and quarter circles.	• Square numbers and square roots • How tp find areas of 2D shapes • How to do inverse operations	• What LCM and HCF means • How to find a number's prime factors • How to find the HCF or LCM of two or more numbers • How to write numbers in index form • • Knowledge of angles 90^o 180^o and 270^o • Area of basic shapes including triangles, quadrilaterals, and circles • Y=mx+c as the equation of a linear graph • What parallel and perpendicular mean • That the hypotenuse is the longest side of a right angled triangle • How to find gradients of lines • How to find reciprocal	decimal to fractions • Simple algebra manipulation • Adding and subtracting fractions • Multiplying fractions