

MATHS Curriculum and Assessment Map 2018-2019 Stage 10

Stage 10	Curriculum content/unit	Method of assessment	Content assessed	Source of assessment	Method for grade boundaries
Aut 1	<p>Investigating properties of shapes (12 HOURS) Calculating (8 HOURS)</p> <p>Solving equations and inequalities I (9 HOURS)</p>	<p>10M10 BAM 10M1 BAM 10M4 BAM</p>	<p>Apply trigonometry in two dimensions</p> <ul style="list-style-type: none"> Correctly label a triangle so as to select the appropriate trigonometric ratio find missing sides of right-angled triangles using trigonometry find missing angles of right-angled triangles using trigonometry apply trigonometry to problems involving multiple triangles <p>Manipulate fractional indices</p> <ul style="list-style-type: none"> evaluate a number raised to a fractional power know that a negative power means you find the reciprocal solve problems involving fractional and negative indices <p>Solve equations using iterative method</p> <ul style="list-style-type: none"> make efficient use of the ANS button on a calculator record solutions in an iterative process using correct notation use an iterative formula to find a solution to a given degree of accuracy carry out a decimal search process 	<p style="text-align: center;">GCSE papers and pixl maths Kangaroo math BAM 'build a mathematician' indicators Kangaroo maths assessment package</p>	<p style="text-align: center;">Percentage to BAM tests scale <30 = 0, 30-<60 = 1, 60 – 100 = 2 relate to individual stage grade key</p>
Aut 2	<p>Mathematical movement I (6 HOURS) Algebraic proficiency: tinkering (12 HOURS)</p> <p>Proportional reasoning (7 HOURS)</p>	<p>10M5 BAM 10M2 BAM END OF TERM ASSESSMENT</p>	<p>Manipulate algebraic expressions by factorising a quadratic expression of the form $ax^2 + bx + c$</p> <ul style="list-style-type: none"> factorise quadratic expressions in the form $a x^2 + bx + c$ recognise when it is not possible to factorise an expression. use my understanding of the difference of 2 squares to factorise fully apply my skills of factorising to simplifying algebraic fraction <p>Solve problems involving direct and inverse proportion</p> <ul style="list-style-type: none"> distinguish between situations involving direct and inverse proportion use proportional relationships to find Missing values connect proportional relationships to graph 		
Spr 1	<p>Pattern sniffing (4 HOURS) Solving equations and inequalities II (6 HOURS) Calculating space (10 HOURS)</p>	<p>10M11 BAM</p>	<p>Calculate volumes of spheres, cones and pyramids</p> <ul style="list-style-type: none"> calculate the volume of a sphere, cone and pyramid. calculate a missing dimension of a sphere, cone or pyramid given its volume. calculate in terms of π 		
Spr 2	<p>Conjecturing (12 HOURS) Algebraic proficiency: visualising I (12HOURS) Exploring fractions, decimals and percentages (6 HOURS)</p>	<p>10M8 BAM 10M3 BAM END OF TERM ASSESSMENT</p>	<p>Interpret a gradient as a rate of change</p> <ul style="list-style-type: none"> know that speed is one example of a rate of change calculate average speed plot and interpret kinematic graphs interpret the meaning of the gradient at a point in the context of the problem <p>Convert between recurring decimals and fractions</p>		

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			<ul style="list-style-type: none"> convert a fraction to a recurring decimal convert a recurring decimal to a fraction using an algebraic method convert between mixed numbers and recurring decimals 		
Sum 1	(10 HOURS) (5 HOURS) (5 HOURS)	10M6 BAM 10M7 BAM	<p>Solve quadratic equations by factorising</p> <ul style="list-style-type: none"> solve a quadratic where the coefficient of x^2 is 1 solve a quadratic where the coefficient of x^2 is greater than 1 know I may have to rearrange a quadratic to be able to solve it recognise and can use the difference of two squares identify quadratics that cannot be solved by factorising <p>Link graphs of quadratic functions to related equations</p> <ul style="list-style-type: none"> plot the graph of a quadratic function relate the factorised form of the expression to the roots of the graph manipulate algebraic expressions to help solve the given problem solve quadratic equations graphically by considering points of intersection 		
Sum 2	(7 HOURS) (6 HOURS) (7 HOURS)	10M13 BAM 10M9 BAM 10M12 BAM END OF YEAR ASSESSMENT	<p>Analyse data through measures of central tendency, including quartiles</p> <ul style="list-style-type: none"> Find Statistics from a cumulative frequency curve or box plot compare the central tendency and spread of two data sets use quartiles and other measures to make estimates about the population <p>Recognise and use the equation of a circle with centre at the origin</p> <ul style="list-style-type: none"> identify the equation of a circle centred on the origin find the radius of a circle when given its equation solve problems involving the equation of a circle <p>Understand and use vectors</p> <ul style="list-style-type: none"> add and subtract vectors multiply by a vector by a scalar express a vector in terms of known vectors find a resultant from given vector 		

