MATHS Curriculum and Assessment Map 2018-2019 Stage 9

Stage 9	Curriculum content/unit	Method of assessment	Content assessed	Source of assessment	Method for grade boundaries
Aut 1	Calculating (14 HOURS) Visualising and constructing (9 HOURS)	9M1 BAM 9M8 BAM	Calculate with roots and integer indices • calculate with positive integer powers • calculate with roots • use a scientific calculator to calculate with powers • use a scientific calculator to calculate with roots Use ruler and compass methods to construct the perpendicular bisector of a line segment and to bisect an angle • construct the perpendicular bisector of a line segment • use ruler and compasses to bisect an angle • use ruler and compasses to construct an angle of 60 • combine ruler and compass methods to solve problems	GCSE papers and pixl maths Kangaroo math BAM 'build a mathematician' indicators Kangaroo maths assessment package	Percentage to BAM tests scale <30 =0, 30-<60 = 1, 60 – 100 = 2 relate to individual stage grade key
Aut 2	Algebraic proficiency: tinkering (10 HOURS) Proportional reasoning (14 HOURS)	9M2 BAM 9M3 BAM 9M7 BAM 9M9 BAM END OF TERM ASSESSMENT	Manipulate algebraic expressions by expanding the product of two binomials • apply the four operations with negative numbers and expressions • know an approach to multiply two linear expressions • multiply two linear expressions • simplify an expression by collecting like terms Manipulate algebraic expressions by factorising a quadratic expression of the form $x^2 + bx + c$ • apply the four operations with negative numbers and expressions • know an approach to factorise a quadratic expression • factorise an expression of the form $x^2 + bx + c$ Change freely between compound units • understand the meaning of a compound unit • know the definitions of speed, density and pressure • convert between different units of speed, density or pressure Solve problems involving similar shapes • can calculate missing lengths in similar shapes • establish the multiplier that connects similar shapes • establish whether shapes are similar		
Spr 1	Pattern sniffing (7 HOURS) Solving equations and inequalities I (8 HOURS) Calculating space (10 HOURS)	9M10 BAM 9M11 BAM	Calculate exactly with multiples of π • calculate area of circles and shapes made using circles • calculate distances involving circles and shapes made using circles • calculate the volume of a cylinder • calculate exactly with multiples of ° Apply Pythagoras' theorem in two dimensions • can calculate the calculate the hypotenuse of a right angle triangle • calculate the calculate the shorter side of a right angle triangle		

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			• use Pythagoras' theorem • to prove whether a triangle has a right angle • use Pythagoras' theorem to find the distance between points		
Spr 2	Conjecturing (7 HOURS) Algebraic proficiency: visualising (11HOURS)	9M12 BAM END OF TERM ASSESSMENT	Use geometrical reasoning to construct simple proofs • use geometric notation for lines and angles • identify and state known facts in a geometrical situation • create a chain of logical steps in a geometrical situation • make a conclusion that finalises a proof		
Sum 1	Algebraic proficiency: visualising (6 HOURS) Solving equations and inequalities II (10 HOURS)	9M4 BAM 9M6 BAM 9M5 BAM	Understand and use the gradient of a straight line to solve problems • know how to find the gradient of a straight line • calculate the gradient of a straight line • use the gradient of a line to help find the equation of a line • identify parallel lines of the form $y = mx + c$ • identify parallel lines when algebraic rearrangement is required • use the gradient of a line to solve problems Plot and interpret graphs of quadratic function • know the characteristic shape of a quadratic graph • interpret a graph of a quadratic function • plot the graph of a simple quadratic function (e.g. $y = x^2 + 3$) • plot the graph of a quadratic function (e.g. $y = x^2 + 3x - 1$) Solve two linear simultaneous equations algebraically and graphically • solve simultaneous equations in simple cases • solve simultaneous equations when multiplication of one equation is required • solve simultaneous equations graphically • derive and solve simultaneous equations		
Sum 2	Understanding risk (8 HOURS) Presentation of data (8 HOURS)	9M13 BAM END OF YEAR ASSESSMENT	Use tree diagrams to list outcomes • an use a tree diagram to list outcomes of successive events • construct a tree diagram to list outcomes of successive events • use a tree diagram to find probabilities of successive event		