

# MATHS Curriculum and Assessment Map 2018-2019 Stage 8

Stage 8	Curriculum content/unit	Method of assessment	Content assessed	Source of assessment	Method for grade boundaries
Aut 1	<a href="#">Numbers and the number system</a> (7 HOURS) <a href="#">Calculating</a> (14 HOURS)	8M2 BAM 8M1 BAM	<a href="#">Convert numbers into standard form and vice versa</a> <ul style="list-style-type: none"> <li>write a large number in standard form</li> <li>write a small number in standard form</li> <li>convert large numbers from standard form to ordinary numbers</li> <li>convert small numbers from standard form to ordinary numbers</li> </ul> <a href="#">Apply the four operations with negative numbers</a> <ul style="list-style-type: none"> <li>use a number line to add and subtract with negative numbers in simple cases</li> <li>add a negative number</li> <li>subtract a negative number</li> <li>multiply negative numbers</li> <li>divide negative numbers</li> <li>apply the correct order of operations when calculating with negative numbers</li> <li>substitute negative numbers into formulae</li> </ul>	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	<a href="#">Visualising and constructing</a> (9 HOURS) <a href="#">Understanding risk I</a> (6HOURS)  <a href="#">Algebraic proficiency: tinkering</a> (10 HOURS)	8M6 BAM 8M13 BAM 8M7 BAM 8M8 BAM END OF TERM ASSESSMENT	<a href="#">Solve problems involving percentage change, including original value problems</a> <ul style="list-style-type: none"> <li>Identify and use a multiplier to increase an amount by a percentage</li> <li>identify and use a multiplier to decrease an amount by a percentage</li> <li>find a percentage change for a given situation</li> <li>identify a reverse percentage problem (finding the original value)</li> </ul> find the original value in a percentage problem <a href="#">Calculate theoretical probabilities for single events</a> <ul style="list-style-type: none"> <li>understand, and can identify, equally likely outcomes of an event</li> <li>work out the probabilities for single events</li> <li>choose whether to</li> <li>write probabilities as fractions, decimals or percentages</li> <li>use fractions, decimals and percentages when working with probabilities</li> <li>use the fact that the sum of all probabilities for an event is 1</li> </ul> <a href="#">Factorise an expression by taking out common factors</a> <ul style="list-style-type: none"> <li>factorise an expression by taking out a numerical factor</li> <li>factorise an expression by taking out a algebraic factor</li> <li>factorise an expression by taking out a numerical and an algebraic factor</li> <li>recognise when an expression is fully factorised</li> </ul> <a href="#">Change the subject of a formula when two steps are required</a> <ul style="list-style-type: none"> <li>identify inverse operations</li> <li>identify the correct order of 'undoing' a formula</li> </ul>	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

# MATHS Curriculum and Assessment Map 2018-2019 Stage 8

			<ul style="list-style-type: none"> <li>change the subject of a formula involving one step</li> <li>change the subject of a formula involving two steps</li> <li>change the subject of a formula when the new subject is being subtracted</li> </ul>		
Spr 1	<p>Exploring fractions, decimals and percentages (5 HOURS)</p> <p>Proportional reasoning (11 HOURS)</p> <p>Pattern sniffing (4 HOURS)</p>	<p>8M4 BAM</p> <p>8M5 BAM</p> <p>8M9 BAM</p>	<p><a href="#">Convert between terminating decimals and fractions</a></p> <ul style="list-style-type: none"> <li>identify when a fraction can be scaled to tenths or hundredths</li> <li>convert a fraction to a decimal by scaling (when possible)</li> <li>identify if a fraction is terminating or recurring</li> <li>write a decimal as a fraction</li> <li>know some decimal and fraction equivalents (e.g. tenths, fifths, eighths)</li> <li>write a fraction in its lowest terms by cancelling common factors</li> </ul> <p><a href="#">Find a relevant multiplier when solving problems involving proportion</a></p> <ul style="list-style-type: none"> <li>Find a (whole number) multiplier to move from one number to another</li> <li>find a (fractional) multiplier to move from one number to another</li> <li>use a multiplier to find missing values in a proportion problem</li> <li>identify when a set of numbers are in proportion</li> <li>set up a proportional reasoning table when solving problems</li> </ul> <p><a href="#">Find and use the nth term for a linear sequence</a></p> <ul style="list-style-type: none"> <li>find the nth term of an ascending linear sequence</li> <li>find the nth term of a descending linear sequence</li> <li>use the nth term of a sequence to work out the value of any term</li> <li>use the nth term of a sequence to deduce if a number is in that sequence</li> </ul>		
Spr 2	<p>Investigating angles (7 HOURS)</p> <p>Calculating fractions, decimals and percentages (6 HOURS)</p> <p>Solving equations and inequalities (6 HOURS)</p>	<p>8M6 BAM</p> <p>8M10 BAM</p> <p>END OF TERM ASSESSMENT</p>	<p><a href="#">Solve problems involving percentage change, including original value problems</a></p> <ul style="list-style-type: none"> <li>identify and use a multiplier to increase an amount by a percentage</li> <li>identify and use a multiplier to decrease an amount by a percentage</li> <li>find a percentage change for a given situation</li> <li>identify a reverse percentage problem (finding the original value)</li> <li>find the original value in a percentage problem</li> </ul> <p><a href="#">Solve linear equations with unknowns on both sides</a></p> <ul style="list-style-type: none"> <li>know how to solve an equation by balancing both sides</li> <li>solve an equation with unknowns on both sides</li> <li>solve an equation with unknowns on both sides when brackets are involved</li> <li>know how to deal with negative numbers as solutions</li> <li>know how to deal with fractions as solutions</li> <li>construct an equation from given information</li> </ul>		

# MATHS Curriculum and Assessment Map 2018-2019 Stage 8

Sum 1	<p>Calculating space (8 HOURS)          Algebraic proficiency: visualising (11 HOURS)          Understanding risk II (2 HOURS)</p>	<p>8M12 BAM          8M11 BAM</p>	<p><a href="#">Apply the formulae for circumference and area of a circle</a></p> <ul style="list-style-type: none"> <li>• know the formulae for circumference and area of a circle</li> <li>• find the radius when the diameter is given</li> <li>• find the diameter when the radius is given</li> <li>• find the circumference of a circle</li> <li>• find the area of a circle</li> <li>• round answers appropriately</li> <li>• state the correct units of a solution to a problem involving circles</li> <li>• find the radius of a circle when area is given</li> <li>• find the diameter of a circle when circumference is given</li> <li>• use a scientific calculator when solving problems involving circles</li> </ul> <p><a href="#">Plot and interpret graphs of linear functions</a></p> <ul style="list-style-type: none"> <li>• substitute numbers into formulae</li> <li>• substitute negative numbers into formulae</li> <li>• create a set of axes</li> <li>• plot points in all four quadrants</li> <li>• know the connection between a mapping diagram, a table of values, and coordinates</li> <li>• create a set of points that are on a straight line described by a formula</li> <li>• create a graph of a linear function</li> </ul>		
Sum 2	<p>Understanding risk II (6 HOURS)          Presentation of data (4 HOURS)          Measuring data (6 HOURS)</p>	<p>END OF YEAR          ASSESSMENT</p>			

