

# Mathematics Developmental Continuum: Mapping the 'Indicators of progress'

	<i>Number</i>	<i>Space</i>	<i>Measurement, chance &amp; data</i>	<i>Structure</i>	<i>Working Mathematically</i>
<b>0.5</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">One to one correspondence</a></li> <li>▪ <a href="#">Ordinal numbers</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Recognising, comparing, sorting and matching shapes</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Awareness of time</a></li> </ul>		<ul style="list-style-type: none"> <li>▪ <a href="#">Simple Patterns</a></li> </ul>
<b>Level 1</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">Counting groups of up to 20 objects</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Developing the everyday language of location</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Comparison of Length</a></li> </ul>		<ul style="list-style-type: none"> <li>▪ <a href="#">Making Better Estimates</a></li> </ul>
<b>1.25</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">Counting with two digit numbers</a></li> </ul>		<ul style="list-style-type: none"> <li>▪ <a href="#">First experiences with chance</a></li> <li>▪ <a href="#">Reading the hour on a clock part 1</a> and <a href="#">part 2</a></li> </ul>		
<b>1.5</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">Counting on</a></li> <li>▪ <a href="#">Compliments to 10</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Folding and Symmetry</a></li> </ul>			<ul style="list-style-type: none"> <li>▪ <a href="#">Using a Calculator</a></li> </ul>
<b>1.75</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">Using a 100-chart for mental calculation</a></li> <li>▪ <a href="#">Fact Families (Addition and Subtraction)</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Identifying shapes</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Pictographs and bar graphs</a></li> <li>▪ <a href="#">Reading clocks to the half hour</a></li> </ul>		<ul style="list-style-type: none"> <li>▪ <a href="#">Recognising and using patterns</a></li> </ul>
<b>Level 2</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">Skip Counting</a></li> <li>▪ <a href="#">Money</a></li> <li>▪ <a href="#">Flexible addition &amp; subtraction</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Simple transformations</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">The idea of a unit</a></li> </ul>		
<b>2.25</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">Renaming three-digit whole numbers</a></li> <li>▪ <a href="#">Early division ideas</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Fitting shapes together</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Formal units for measuring</a></li> </ul>		
<b>2.5</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">Early fraction ideas with models</a></li> <li>▪ <a href="#">Advanced skip counting</a></li> <li>▪ <a href="#">Fractions on number lines</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">From Appearance to Properties: Classifying shapes</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Reading clocks to quarter hours</a></li> </ul>		<ul style="list-style-type: none"> <li>▪ <a href="#">The meaning of the equals sign</a></li> <li>▪ <a href="#">Construction of Number Sentences</a></li> </ul>
<b>2.75</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">Developing better multiplication strategies</a></li> <li>▪ <a href="#">Fact Families (Multiplication and Division)</a></li> </ul>		<ul style="list-style-type: none"> <li>▪ <a href="#">Measuring area</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Properties of operations: Spin, shuffle and split</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Using diagrams and models</a></li> </ul>

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<b>Level 3</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">Fluent recall of multiplication facts</a></li> <li>▪ <a href="#">Algorithms for addition and subtraction of decimals</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Grid references and compass points</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Fairness relates to having an equal chance of winning</a></li> </ul>		
<b>3.25</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">Understanding 'Order of Operations'</a></li> <li>▪ <a href="#">Choosing multiplication and division for calculations</a></li> <li>▪ <a href="#">Multiples and fractions of fractions</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Angles: static &amp; dynamic</a></li> <li>▪ <a href="#">Mental addition and subtraction with larger numbers</a></li> <li>▪ <a href="#">Mental strategies for division</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Reading clocks to the nearest minute</a></li> <li>▪ <a href="#">Extending work with formal units</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Missing Number Sentences</a></li> </ul>	
<b>3.5</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">A fraction is a number</a></li> <li>▪ <a href="#">Calculating with large numbers</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Shape: Classify 2D shapes using features</a></li> <li>▪ <a href="#">Line Symmetry - also called Mirror Symmetry</a></li> <li>▪ <a href="#">Visualisation in 2 and 3 dimensions</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Mental strategies for division</a></li> </ul>		<ul style="list-style-type: none"> <li>▪ <a href="#">Explain how Maths is useful</a></li> </ul>
<b>3.75</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">Identifying factors and relationship to multiplication</a></li> <li>▪ <a href="#">Estimating large numbers</a></li> </ul>		<ul style="list-style-type: none"> <li>▪ <a href="#">Choosing Appropriate Graphical Displays</a></li> <li>▪ <a href="#">Median as another central measure</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Venn Diagrams</a></li> </ul>	
<b>Level 4</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">Comparing and ordering decimal numbers</a></li> <li>▪ <a href="#">Partial products in multiplication</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Networks</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Perimeter and area are not the same</a></li> <li>▪ <a href="#">Converting between measurement units</a></li> <li>▪ <a href="#">Time Intervals</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Rules for Sequences</a></li> <li>▪ <a href="#">Equivalence in Number Sentences</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Counter-examples</a></li> <li>▪ <a href="#">Real world investigations</a></li> </ul>
<b>4.25</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">Which zeros matter?</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Changing conceptions of shapes</a></li> </ul>		<ul style="list-style-type: none"> <li>▪ <a href="#">The meaning of letters in algebra</a></li> </ul>	
<b>4.5</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">Fractions for algebra and arithmetic</a></li> <li>▪ <a href="#">Base 2 notation</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Congruence from rotations and reflections</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Dot plots and stem-and-leaf plots</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Structure of algebraic expressions</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Carrying out investigations</a></li> </ul>
<b>4.75</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">Subtracting negative numbers</a></li> <li>▪ <a href="#">A negative multiplied by a negative</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Scales on maps</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Area of a circle</a></li> <li>▪ <a href="#">Developing a critical approach to summary statistics and graphs</a></li> </ul>		

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<b>Level 5</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">Conceptual obstacles when multiplying and dividing by numbers less than 1</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Understanding contour lines</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Short-run variation and long-run stability</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Sets</a></li> <li>▪ <a href="#">Manipulating symbols</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Mathematical deductions</a></li> </ul>
<b>5.25</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">Adding and taking off a percentage</a></li> </ul>		<ul style="list-style-type: none"> <li>▪ <a href="#">Converting between derived units</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Conceptual growth for solving equations</a></li> </ul>	
<b>5.5</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">Solving percentage problems</a></li> <li>▪ <a href="#">Easy and hard ratio and proportion questions</a></li> <li>▪ <a href="#">Surds</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Latitude and Longitude</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Calculations involving rates</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Exponential functions</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Verifying results from CAS</a></li> </ul>
<b>5.75</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">Rationalising Surds</a></li> </ul>		<ul style="list-style-type: none"> <li>▪ <a href="#">Deeper understanding of Pythagoras' theorem</a></li> </ul>		<ul style="list-style-type: none"> <li>▪ <a href="#">Effective and efficient use of a graphics calculator</a></li> </ul>
<b>Level 6</b>	<ul style="list-style-type: none"> <li>▪ <a href="#">The Euclidean Algorithm</a></li> </ul>	<ul style="list-style-type: none"> <li>▪ <a href="#">Angles in circles</a></li> </ul>			<ul style="list-style-type: none"> <li>▪ <a href="#">Mathematical arguments</a></li> </ul>