

National 4 Expressions and Formulae 1.1	NS	OT	VG
<u>Substitution</u>			
I can substitute numbers into an expression and calculate an answer			
TJ Nat 4-2 Ch 14			
<u>Expanding Brackets</u>			
I can collect like terms in expressions such as $3a + 4b - a + 6c$			
I can expand brackets in the form $5(a \pm 2c)$ or $3(4x \pm 2)$			
I can expand brackets in the form $x(2x \pm 3)$			
TJ Nat 4-1 Ch 7, TJ Nat 4-2 Ch 17			
<u>Factorising</u>			
I can remove common factors from expressions in the form			
$9c + 27, 6a - 8, x^2 - 3x$			
TJ Nat 4-2 Ch 17			
<u>Patterns and Formulae</u>			
I can extend a straightforward number pattern (1,3,5,7,...)			
I can determine the formula for a number pattern			
I can evaluate a pattern formula for a given value			
TJ Nat 4-1 Ch 16, TJ Nat 4-2 Ch 15			
<u>Gradient</u>			
I can calculate gradient as V/H			
TJ Nat 4-2 Ch 4			
National 4 Expressions and Formulae 1.2	NS	OT	VG
<u>Perimeter, Circumference and Area</u>			
I can calculate the perimeter and area of a composite shape			
I can calculate the area of a parallelogram, kite and trapezium			
I can calculate the circumference of a circle			
I can calculate the area of a circle			
TJ Nat 4-1 Ch 8, TJ Nat 4-2 Ch 11			
<u>Surface Area and Volume</u>			
I can draw the net of a prism			
I can calculate the surface area of a prism			
I can calculate the volume of a cylinder and other prisms if given the area of the base			
TJ Nat 4-2 Ch 6 and 8			
<u>Symmetry</u>			
I can reflect a shape in the x and y-axes			
I can reflect a shape in the line $y = x$			
I can rotate a shape through 90° and 180°			
I can create a shape with rotational symmetry of order 4 and order 2			
TJ Nat 4-2 Ch 3			

National 4 Expressions and Formulae 1.3	NS	OT	VG
<u>Mean, Median and Mode</u>			
I can calculate mean, median, mode and range from a data sample			
I can use mean, median, mode and range to compare data sets			
TJ Nat 4-1 Ch 12 and Ch 24			
<u>Frequency Tables</u>			
I can calculate construct a frequency table from raw data			
I can use a frequency table to calculate mode, mean and median			
TJ Nat 4-2 Ch 16			
<u>Graphs and Charts</u>			
I can interpret Scattergraphs and Pie Charts			
I can draw Scattergraphs, Bar Charts and Pie Charts			
TJ Nat 4-1 Ch 12 and Ch 24			
<u>Probability</u>			
I can calculate the probability of an event happening			
TJ Nat 4-1 Ch 17			