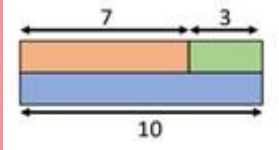


Mathematics		Algebraic Thinking		Year 7	Term 1
Week 1: 7 times table		Week 2: Sequences		Week 3: Algebraic notation 1	
$1 \times 7 = 7$ $2 \times 7 = 14$ $3 \times 7 = 21$ $4 \times 7 = 28$ $5 \times 7 = 35$ $6 \times 7 = 42$	$7 \times 7 = 49$ $8 \times 7 = 56$ $9 \times 7 = 63$ $10 \times 7 = 70$ $11 \times 7 = 77$ $12 \times 7 = 84$	<p>Term: Each number (or object) in a sequence</p> <p>Term to term: A term to term rule allows you to find the next term in a sequence if you know other terms</p> <p>Difference: The result of subtracting two values. <i>Example: The difference of 8 and 5 is 3 because $8 - 5 = 3$</i></p> <p>Linear: A linear sequence increases or decreases by the same amount between each term. Terms have a common difference</p> <p>Non-linear: A sequence which does not have a common difference</p> <p>Geometric: A sequence made by multiplying by the same value each time</p> <p>Ascending: An ascending sequence increases</p> <p>Descending: A descending sequence decreases</p>		<p>Input: The value which goes into a function machine</p> <p>Output: The value which comes out of a function machine</p> <p>Operation: A mathematical process. The four basic operations are addition, subtraction, multiplication and division</p> <p>Square (operation): When a number is multiplied by itself. <i>Example: The square of 3 is 9 because $3 \times 3 = 9$</i></p> <p>Inverse: The inverse of something is its exact opposite. <i>Example: addition is the inverse of subtraction</i></p> <p>Expression: A term or group of terms which may include numbers, letters and operations</p> <p>Variable: A quantity which can take a range of values</p> <p>Coefficient: The quantity of a variable. <i>Example: In the expression $5y$ there are 5 lots of y, therefore the coefficient of y is 5</i></p> <p>Constant: A known value which does not change</p>	
Week 4: Algebraic notation 2		Week 5: Equality and Equivalence 1		Week 6: Equality and equivalence 2	
<p>Commutative: Giving the same result irrespective of order. <i>Example: $2 + 3 = 5$ and $3 + 2 = 5$</i></p> <p>Substitution: Replacing a variable with a known value</p> <p>Evaluate: means to calculate the value of. <i>Example: Evaluate 52. The solution is 25 because $5 \times 5 = 25$</i></p> <p>Brackets: Used in pairs to group things together. <i>Example: $2(x + 1)$ is two lots of $x + 1$</i></p> <p>Equation: States that two things are equal. It contains expressions on both sides of an equals sign. <i>Example: $5 = 2x + 1$</i></p> <p>Consecutive: Ordered numbers without gaps. <i>Example: 12, 13, 14, 15</i></p> <p>Linear function: A function which creates a straight line graph</p>		<p>Equality: having the same value</p> <p>Fact family: A group of mathematical facts using the same values. <i>Example:</i></p> <p>$7 + 3 = 10$ $10 - 7 = 3$ $3 + 7 = 10$ $10 - 3 = 7$</p>  <p>Unknown: Another word for a variable</p> <p>Solution : a value we can put in place of a variable that makes the equation true. <i>Example: In the equation $x + 2 = 5$, the solution is 3 because $3 + 2 = 5$</i></p> <p>Solve: to find the solution of a given equation. We can solve equations by using inverse operations</p> <p>Product: The result of a multiplication of two or more</p>		<p>Term (algebraic): can be number or variables</p> <p>Like term: Terms containing the same variable. <i>Example: $4a$ and $-2a$ are like terms as they both have the variable a</i></p> <p>Unlike terms: Terms which do not contain the same variable. <i>Example: $4y$ and $3x$ are unlike terms.</i></p> <p>Equivalent: Of equal value. We use the symbol \equiv to denote this. <i>Example: $2y + 3y \equiv 5y$ is true for all values of y</i></p> <p>Simplify: To simplify an expression we often collect like terms. <i>Example: $2a + 3a + 4b \equiv 5a + 4b$</i></p> <p>Convention: A mathematical convention is an agreed way of doing something. <i>Example: We write $3xy$ as $3y$ not $y3$</i></p> <p>One step equation: Equations which have only one operation <i>Example: $3x = 15$ contains one multiplication</i></p>	