



Functions

Keywords:	Functions, input, output, inverse function, composite function, flow charts				
Definition / Description:	A function is a relationship between variables. The inverse function is the reverse process. A composite function is the succession of two functions.				
Knowledge points:	Interpret simple functions as expressions with inputs and outputs	Understand and use the function notation	Solve equations that use the function notation	Interpret and use the inverse function	Interpret and use the composite function
Knowledge point examples:	<div style="display: flex; justify-content: space-between; align-items: center; margin-bottom: 10px;"> Input Output </div>  <p>Write down the output y as an expression in terms of x.</p> $y = 5x - 8$ <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 10px;"> Input Output </div>  <p>Work out the output when the input is 10</p> $(10 - 4) \div 2 = 3$	<p>Given that $f(x) = 4x - 5$ work out</p> <p>(a) $f(-6)$</p> <p>(b) $f(0.5)$</p> <p>(a) $4x - 6 - 5 = -29$</p> <p>(b) $4 \times 0.5 - 5 = -3$</p>	$f(x) = 3x + 2$ <p>Solve $f(x) = 0$</p> $3x + 2 = 0$ $3x = -2$ $x = -\frac{2}{3}$	$g(x) = \frac{7x-1}{2}$ <p>Find $g^{-1}(x)$</p> $y = \frac{7x-1}{2}$ $2y = 7x - 1$ $2y + 1 = 7x$ $x = \frac{2y + 1}{7}$ $g^{-1}(x) = \frac{2x + 1}{7}$	$f(x) = 5x + 1, g(x) = x^2$ $fg(x) = f(x^2)$ $= 5x^2 + 1$
Linked Knowledge Maps	Solving linear equations				