

SOLVING EQUATIONS

Keywords:	Solve / Equation / Coefficient / Inverse / Equal / Linear Equation					
Definition / Description:	Solve: To find the answer/value of something	Equation: A mathematical statement that shows two things are equal	Coefficient: A number or letter multiplying an algebraic term	Inverse: The reverse or opposite	Equal: An equals sign shows the equality between two expressions	Linear Equation: An equation where no variable has a power greater than one
Knowledge points:	Solve simple linear equations by using inverse operations Solve simple linear equations with integer coefficients where the unknown appears on one or both sides of the equation or where the equation involves brackets Set up a simple linear equation to solve problems					
Knowledge point examples:	<p>One Step</p> $3a = 15$ <p>($\div 3$) ($\div 3$)</p> $a = 5$	<p>Two Step</p> $4a - 3 = 17$ <p>($+3$) ($+3$)</p> $4a = 20$ <p>($\div 4$) ($\div 4$)</p> $a = 5$	<p>With Brackets</p> $2(a + 3) = 11$ $2a + 6 = 11$ <p>(-6) (-6)</p> $2a = 5$ <p>($\div 2$) ($\div 2$)</p> $a = 2.5$	<p>Unknowns on both sides</p> $3a + 7 = 5a + 11$ <p>($-3a$) ($-3a$)</p> $7 = 2a + 11$ <p>(-11) (-11)</p> $-4 = 2a$ <p>($\div 2$) ($\div 2$)</p> $a = -2$	<p>Forming and solving equations:</p> <p><i>Jack is y years old.</i></p> <p><i>His brother John is 5 years older than him.</i></p> <p><i>The sum of their ages is 21. How old is Jack?</i></p> $y + y + 5 = 21$ $2y + 5 = 21$ <p>(-5) (-5)</p> $2y = 16$ <p>($\div 2$) ($\div 2$)</p> $y = 8$ <p><u>Jack is 8 years old</u></p>	
Linked Knowledge Maps:	Algebraic Manipulation and Notation / Linear Graphs / quadratic equations / inequalities / simultaneous equations / linear sequences					