

## Stage 7 – Algebraic proficiency: tinkering

Know it!



Knowledge	
I know...	The meaning of expression, term, formula, equation, function
I know...	How to use basic algebraic notation (the 'rules' of algebra)
I know...	How to simplify a simple expression by collecting like terms
I know...	How to simplify more complex expressions by collecting like terms
I know...	How to substitute positive numbers into expressions and formulae

Link it!



Backward	Forward
Use symbols (including letters) to represent missing numbers	Expanding single brackets
Worded Formulae	Expanding double brackets
Order of operations	Solving equations

Prove it!



<p>Show me an example of an expression / formula / equation</p> <p>Always / Sometimes / Never:  <math>4(g + 2) = 4g + 8</math>,    <math>3(d + 1) = 3d + 1</math>,    <math>a^2 = 2a</math>,    <math>ab = ba</math></p> <p>Jenny writes <math>2a + 3b + 5a - b = 7a + 3</math>.            Kenny writes <math>2a + 3b + 5a - b = 9ab</math>. Who is correct? Why?</p>
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Say it!



Vocabulary	Definition
Algebra	Algebra uses letters (like x or y) or other symbols in place of values, and then plays with them using special rules.
Expression	Numbers, symbols and operators (such as + and ×) grouped together that show the value of something.
Term	In Algebra a term is either a single number or variable, or numbers and variables multiplied together.
Equation	An equation says that two things are equal.
Function	A special relationship where each input has a single output.
Variable	A symbol for a value we don't know yet. It is usually a letter like x or y.
Substitute	Putting values where the letters are.
Simplify/Collect	Combining the terms in an algebraic expression.



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Show me an example of an expression / formula / equation
Always / Sometimes / Never: $4(g + 2) = 4g + 8$ , $3(d + 1) = 3d + 1$ , $a^2 = 2a$ , $ab = ba$
Jenny writes $2a + 3b + 5a - b = 7a + 3$ .
Kenny writes $2a + 3b + 5a - b = 9ab$ . Who is correct? Why?

Say it!



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Expression	
Term	
Equation	
Function	
Variable	
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Simplify/Collect	