



## 3 - Algebra Basics 1

### Content

- A **variable** or an **unknown** is a letter used to represent a number, these can take any values.
- An **expression** is made up numbers and/or letters representing unknown values where there is no equals symbol. For example,  $4a + 6$  or  $a + b$ .
- **Terms** are the separate parts of expressions. For example, in  $5x + 3y - 4$ , there are three terms  $5x$ ,  $+3y$  and  $-4$
- **Coefficients** are the numbers in front of the variable, for example in  $6x$  the coefficient is 6 and in  $-7y^2$  it is  $-7$ .

To **simplify** an expression, you collect together all the terms that are alike. Remember, each term comes with the sign in front of it.

#### Examples:

Simplify the following

$$1) x + x + x + x + x = 5x$$

$$2) 5e - 2e + e = 4e$$

$$3) 4x + 2y - x + 5y + 6 = 3x + 7y + 6$$

$$4) 3x^2 + 5x + 2x^2 - 4x = 5x^2 + x$$

$$5) 5 \times 4g = 20g$$

$$6) 3b \times 4c = 12bc$$

### Linked Prior Topics

Times tables, addition and subtraction

### Vocabulary

Variable, unknown, expression, term, coefficient, simplify

### Linked Future Topics

Substitution, solving equations and formulae