

Maths Knowledge Organiser: Year 7: Algebra and Multiplication

The page shows key knowledge from the fortnightly assessment students do in Maths.

Collecting like terms \equiv symbol

The \equiv symbol means equivalent to.
It is used to identify equivalent expressions

Collecting like terms

Only **like terms** can be combined

$$4x + 5b - 2x + 10b$$

$$2x + 15b$$

Common misconceptions

$$2x + 3x^2 + 4x \equiv 6x + 3x^2$$

Although they both have the x variable, x^2 and x terms are unlike terms so can not be collected.

Like and unlike terms

Like terms are those whose variables are the same

♥ and 3♥ are **like** terms
the variable is the same

★ and 3♥ are **unlike** terms
the variables are NOT the same

Examples and non-examples

Like terms

$y, 7y$
 $2x^2, x^2$
 $ab, 10ba$
 $5, -2$

Un-like terms

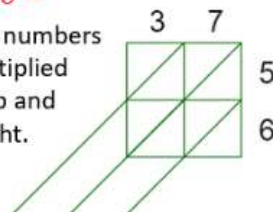
$y, 7x$
 $2x^2, 2c^2$
 $ab, 10a$
 $5, -2t$

Note here ab and ba are commutative operations, so are still like terms

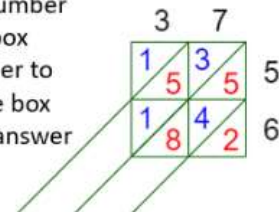
Lattice Multiplication

$$37 \times 56 =$$

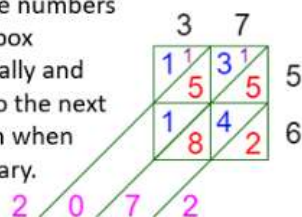
Write the numbers to be multiplied on the top and on the right.



Multiply the number on top of the box with the number to the right of the box and write the answer in the box



Add the numbers in the box diagonally and carry to the next column when necessary.



$$37 \times 56 = 2072$$