



1: 7 times table

$1 \times 7 = 7$	$7 \times 7 = 49$
$2 \times 7 = 14$	$8 \times 7 = 56$
$3 \times 7 = 21$	$9 \times 7 = 63$
$4 \times 7 = 28$	$10 \times 7 = 70$
$5 \times 7 = 35$	$11 \times 7 = 77$
$6 \times 7 = 42$	$12 \times 7 = 84$

2: Sequences

Term - Each number (or object) in a sequence

Term to term - A **term to term rule** allows you to find the next term in a sequence if you know other terms

Difference - The result of subtracting two values. *Example: The difference of 8 and 5 is 3 because $8 - 5 = 3$*

Linear - A **linear** sequence increases or decreases by the same amount between each term. Terms have a common difference

Non-linear - A sequence which does not have a common difference

Geometric - a sequence made by multiplying by the same value each time

Ascending - An ascending sequence increases

Descending - A descending sequence decreases

3: Algebraic notation 1

Input - The value which goes into a function machine

Output - The value which comes out of a function machine

Operation - A mathematical process. The four basic operations are addition, subtraction, multiplication and division

Square (operation) - When a number is multiplied by itself. *Example: The square of 3 is 9 because $3 \times 3 = 3^2 = 9$*

Inverse - The inverse of something is its exact opposite. *Example: addition is the inverse of subtraction*

Expression - A term or group of terms which may include numbers, letters and operations

Variable - A quantity which can take a range of values

Coefficient - The quantity of a variable. *Example: In the expression $5y$ there are 5 lots of y , therefore the coefficient of y is 5*

Constant - A known value which does not change

4: Algebraic notation 2

Commutative - Giving the same result irrespective of order. *Example: $2 + 3 = 5$ and $3 + 2 = 5$*

Substitution - Replacing a variable with a known value

Evaluate means to calculate the value of. *Example: Evaluate 5^2 . The solution is 25 because $5 \times 5 = 25$*

Brackets - Used in pairs to group things together. *Example: $2(x + 1)$ is two lots of $x + 1$*

Equation - States that two things are equal. It contains expressions on both sides of an equals sign. *Example: $5 = 2x + 1$*

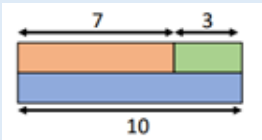
Consecutive - Ordered numbers without gaps. *Example: 12, 13, 14, 15*

Linear function - A function which creates a straight line graph

5: Equality and equivalence 1

Equality - having the same value

Fact family - A group of mathematical facts using the same values. *Example:*



$7 + 3 = 10$ $10 - 7 = 3$

$3 + 7 = 10$ $10 - 3 = 7$

Unknown - Another word for a **variable**

Solution - a value we can put in place of a variable that makes the equation true. *Example: In the equation $x + 2 = 5$, the solution is 3 because $3 + 2 = 5$*

Solve - to find the solution of a given equation. We can solve equations by using **inverse** operations

Product - The result of a **multiplication** of two or more values. *Example: The product of 4 and y is $4y$*

6: Equality and equivalence 2

Term (algebraic) - can be number or variables

Like term - Terms containing the same variable. *Example: $4a$ and $-2a$ are like terms as they both have the variable a*

Unlike terms - Terms which do not contain the same variable. *Example: $4y$ and $3x$ are unlike terms.*

Equivalent - Of equal value. We use the symbol \equiv to denote this. *Example: $2y + 3y \equiv 5y$ is true for all values of y*

Simplify - To simplify an expression we often **collect like terms**. *Example: $2a + 3a + 4b \equiv 5a + 4b$*

Convention - A mathematical **convention** is an agreed way of doing something. *Example: We write $3 \times y$ as $3y$ not $y3$*

One step equation - Equations which have only one operation
Example: $3x = 15$ contains one multiplication