



Algebra - Year 6

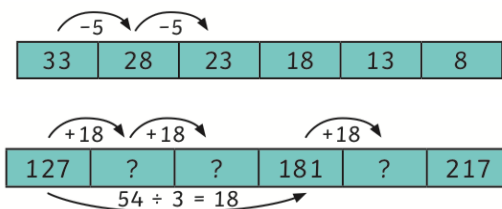
Key vocabulary

Algebra	Algebra uses letters (like x or y) or other symbols in place of values, and then plays with them using special rules.
Variable	A symbol for a number we don't know yet. It is usually a letter like x or y .
Equation	An equation says that two things are equal.
Formula	A rule or fact written with mathematical symbols.
Enumerate	Is a complete, ordered listing of all the items in a collection.
Substitution	Putting values where the letters are.

Number Sequences

A linear number sequence is a sequence where each value increases or decreases by the same amount each time. Each number in a linear number sequence is called a term. The constant change between each number is called the term to term rule. To identify the term to term rule, find the difference between two adjacent terms.

When you know the term to term rule, you can use it to find the next number in the sequence. It can also be used to find a missing



Forming Expression

An expression is a group of numbers, letters and operation symbols.

Add 14 to a

Subtract 20 from b

Multiply c by 4

12 more than d

Multiply e by 3 and subtract 5

Add 12 to f and then multiply by 2

$$a + 14$$

$$b - 20$$

$$4c$$

$$d + 12$$

$$3e - 5$$

$$2(f + 12)$$

Forming Equations

An equation is a number statement with an equal sign ($=$). Expressions on either side of the equal sign are of equal value.

$$a + 14 = 20$$

$$b - 20 = 15$$

$$4c = 28$$

$$d + 12 = 30$$

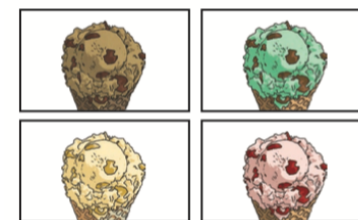
$$3e - 5 = 10$$

$$2(f + 12) = 44$$

Enumerating Possibilities

Enumerating means making a complete list of answers to a problem.

- Use a system for finding the possibilities.
- Organise your findings in an ordered list or table.
- Have a way of deciding when all possibilities have been found.



chocolate and strawberry

chocolate and vanilla

chocolate and mint

strawberry and vanilla

strawberry and mint

vanilla and mint

Two scoops of two different flavours give six possible combinations

Equations with pairs of unknown

In an equation with two unknown numbers, there may be several possible values for the unknowns that will balance the equation.

$ab = 18$	
a	b
1	18
2	9
3	6
6	3
9	2
18	1

$2a + b = 10$	
a	b
2	6
3	4
4	2
5	0