## Examples of what children should be able to do, in relation to each (boxed) Programme of Study statement

**find pairs of numbers that satisfy number sentences with two unknowns**

**enumerate all possibilities of combinations of two variables.**

Children should be confident to answer questions such as;

Here are five number cards:



A and B stand for two different whole numbers.

The sum of all the numbers on all five cards is 30.

What could be the values of A and B?

**express missing number problems algebraically**

**use simple formulae**

Children should be able to express a relationship in symbols, and start to use simple formulae. For example:

* Use symbols to write a formula for the number of months m in y years.
* Write a formula for the cost of c chews at 4p each.
* Write a formula for the nth term of this sequence: 3, 6, 9, 12, 15…
* The perimeter of a rectangle is 2 × (l + b), where l is the length and b is the breadth of the rectangle.
* What is the perimeter if l = 8 cm and b = 5 cm?
* The number of bean sticks needed for a row which is m metres long is 2m + 1. How many bean sticks do you need for a row which is 60 metres long?
* Plot the points which show pairs of numbers with a sum of 9.

**generate and describe linear number sequences**

Children should experience activities such as;

A number sequence is made from counters.

There are 7 counters in the third number.



How many counters in the 6th number? the 20th...?

Write a formula for the number of counters in the nth number in the sequence.

## Non-Statutory Guidance

Pupils should be introduced to the use of symbols and letters to represent variables and unknowns in mathematical situations that they already understand, such as:

* missing numbers, lengths, coordinates and angles
* formulae in mathematics and science
* arithmetical rules (e.g. a + b = b + a)
* generalisations of number patterns
* number puzzles (e.g. what two numbers can add up to)