Iteration

An **iterative formula** tells us how to use the current solution (e.g. x_0) to calculate the next solution

next solution | current solution

Example The iterative formula to determine the next integer is $x_{n+1} = x_n + 1$

If we are given the current solution $x_0 = 3$ and we want to calculate the value of x_1, we substitute into the iterative formula above with $n = 0$:

$$x_1 = x_0 + 1$$
$$x_1 = 3 + 1 = 4$$

We can use this process of **iteration** to find **approximate solutions** for equations.

THIRD SPACE LEARNING