Introduction to Function Notation

A “function” in mathematics is a particular type of relationship where an input can produce precisely one output.

y=x2, for example, is a function, because each x-value produces precisely one value of y. Note that the inverse is not true. If I calculate square roots, each number has two square roots, so y = √x is not a function. This distinction is not vital at this stage, but this is the point where we need to introduce function notation.

Further Mathematics GCSE students will already have seen f(x) = x2 as an alternative to y=x2, and the purpose of this worksheet is simply to point out that here, they are notations for the same relationship.

Example

If f(x) = 3x2 – x then f(4) just means substitute x=4 into the expression on the right hand side.

 f(4) = 3 x 42 – 4

 = 44

The letter f is often used, but g and h are almost equally common.

Exercise 2A (from the textbook)



Work through this exercise, and bring solutions to the next lesson.