

## Truth Tables | Part A

So you already know that data and instructions are based on a binary system, which uses two states, on or off, true or false, 1 or 0. You also know that there are simple circuits called logic gates, and that there are three fundamental ones that you need to know about. Now you will become introduced to the concept of truth tables. A truth table is a method of recording all of the possible input combinations and determining the output for each combination. AND is a logic gate which outputs 1 if both of the inputs are 1. Otherwise it outputs 0.

Here is what the truth table looks like. A and B show the input values, and as you can see, there are four different combinations. The output column shows what would be output as a result of the two inputs. As you can see, the AND gate needs both of the inputs to be a 1 for the output to be a 1.