COUNTING IN BINARY

Key Revision Facts: GCSE Computer Science

Transistors are tiny electronic switches that have two states on or off. On is called High and represented by a 1, off is called Low and is represented by a 0. Computer processes are made from thousands of transistors. At a low-level computer processors process 1's and 0's.

Binary numbers are represented by 1's and 0's.

The binary number 1011 is decimal number 11.

256	128	64	32	16	8	4	2	1
0	0	0	0	0	1	0	1	1

The decimal number is calculated by adding all the columns which contain a 1.

8 + 2 + 1 = 11

Below are some more examples:

256	128	64	32	16	8	4	2	1	Decimal Number
1	0	0	1	0	1	1	0	0	256 + 32 + 8+4 =300
0	1	0	0	0	0	0	0	1	128 + 1 =129
0	0	1	1	0	0	0	0	0	64 + 32 = 96
0	0	0	0	0	1	1	1	1	8 + 4 + 2 + 1 =15
1	0	0	0	0	0	0	1	0	256 + 2 =258