

WHAT ARE BINARY NUMBERS?

UNDERSTANDING BINARY SYSTEM

WHAT IS BINARY?

A binary number is made up of 0's and 1's.

Like our decimal system, you count, but there are no 2,3,4,5,6,7,8,9.

We call a **bit** the single digit.

11011 This binary number has 5 bits.

Binary numbers are not only used in mathematics, but they are the language that computers understand.

CAN WE COUNT IN BINARY ? LET'S BEGIN 0, 1... THEN HOW DO WE REPRESENT 2?

0	0	We start at 0.
1	1	Then we go to 1.
10	2	Then we add a 1 on the left, and start back at 0.
11	3	Still with the 1 on the left, we change to 1.
100	4	Then we add a 1 on the left, and start back at 0.
101	5	and so on...
110	6	
111	7	
1000	8	
1001	9	
1010	10	
1011	11	
1100	12	

Once we have used all the possible combinations of 0's and 1's, we add another number on the left.