

Sign/magnitude notation is the simplest and one of the most obvious methods of encoding positive and negative numbers. Assign the leftmost (most significant) bit to be the sign bit. If the sign bit is 0, this means the number is positive. If the sign bit is 1, then the number is negative. The remaining $m-1$ bits are used to represent the magnitude of the binary number in the unsigned binary notation.

Example:

Binary Value

0000 +0

0001 +1

0010 +2

0011 +3

0100 +4

0101 +5

0110 +6

0111 +7

1000 -0

1001 -1

1010 -2

1011 -3

1100 -4

1101 -5

1110 -6

1111 -7