

## 2's Complement System

- Normal binary place values except MSB has negative weight
  - MSB of 1 =  $-2^{(n-1)}$

## 2's Complement Range

- Given n bits...
  - Max positive value = 011...11
    - Includes all n-1 positive place values
  - Max negative value = 100...00
    - Includes only the negative MSB place value
- Range with n-bits of 2's complement
  - $[-2^{(n-1)} \text{ to } +2^{(n-1)}-1]$