

A Question for You: How Many Bits do We Need?

How many bits do we need to represent a whole number in the range...

- from **0 to 31**?
 - 32 different integers
 - so **we need 5 bits** ($2^5 = 32$ bit patterns)
- from **0 to 100**?
 - 101 different integers
 - so **we need 7 bits** ($2^7 = 128$ bit patterns)