Vocabulary: Number Systems

dictionary2

**Vocabulary**

* Base-10 system – a system of numbers based on powers of 10.
  + For example, in base-10, the number 647 can be written in expanded form as the sum (6 • 102) + (4 • 101) + (7 • 100) = 600 + 40 + 7.
* Binary system – a base-2 number system.
  + There are only two digits in a binary system, 0 and 1.
* Digit – any of the Arabic numerals, 0 through 9, used to build numbers in the base-10 system.
  + For example, the number 647 has three digits: 6, 4, and 7.
* Place value – the value of the position of a digit in a number.
  + In the base-10 system, the place values are powers of 10 (100, 101, 102) to represent ones, tens, and hundreds.
  + For example, in base-10, the number 647 means 6 hundreds, 4 tens, and 7 ones.
    - 647 = 600 + 40 + 7
    - 647 = (6 • 102) + (4 • 101) + (7 • 100)