

Roman Numerals

A **numeral** is a symbol used to represent a number.

Roman numerals, developed about 500 B.C., use letters to represent numbers.

Seven different letters are used in Roman numerals. Each letter stands for a different number.

A string of letters means that their values should be added together. For example, CCC = $100 + 100 + 100 = 300$, and CLXII = $100 + 50 + 10 + 1 + 1 = 162$.

If a smaller value is placed *before* a larger value, the smaller value is subtracted instead of added. For example, IV = $5 - 1 = 4$, and CDX = $500 - 100 + 10 = 410$.

There are several **rules for subtracting letters**.

- ◆ The letters I (1), X (10), C (100), and M (1,000) represent powers of ten. These are the only letters that may be subtracted. For example, 95 in Roman numerals is XCV (VC for 95 is incorrect because V is not a power of ten).
- ◆ One letter may not be subtracted from a second letter if the value of the second letter is more than 10 times the value of the first. The letter I may be subtracted only from V or X. The letter X may be subtracted only from L or C. For example, 49 in Roman numerals is XLIX (IL for 49 is incorrect). And 1990 in Roman numerals is MCMXC (MXM for 1990 is incorrect).
- ◆ Only a *single* letter may be subtracted from another that follows. For example, 7 in Roman numerals is VII (IIIX for 7 is incorrect). And 300 in Roman numerals is CCC (CCD for 300 is incorrect).

The largest Roman numeral, M, stands for 1,000. One way to write large numbers is to write a string of Ms. For example, MMMM stands for 4,000. Another way to write large numbers is to write a bar above a numeral. The bar means that the numeral beneath should be multiplied by 1,000. So, $\overline{\text{IV}}$ also stands for 4,000. And $\overline{\text{M}}$ stands for $1,000 * 1,000 = 1$ million.

Roman Numeral	Number
I	1
V	5
X	10
L	50
C	100
D	500
M	1,000