**Floating Point Numerals.**

They express real values, with decimals and/or exponents. They can include either a decimal point, an e character (that expresses *"by ten at the Xth height"*, where *X* is an integer value that follows the e character), or both a decimal point and an e character:

|  |  |  |
| --- | --- | --- |
| 1 2 3 4 | 3.14159 // 3.14159  6.02e23 // 6.02 x 10^23  1.6e-19 // 1.6 x 10^-19  3.0 // 3.0 |  |

These are four valid numbers with decimals expressed in C++. The first number is PI, the second one is the number of Avogadro, the third is the electric charge of an electron (an extremely small number) -all of them approximated-, and the last one is the number *three* expressed as a floating-point numeric literal.

The default type for floating-point literals is double. Floating-point literals of type float or long double can be specified by adding one of the following suffixes:

|  |  |
| --- | --- |
| **Suffix** | **Type** |
| f *or* F | float |
| l *or* L | long double |

For example:

|  |  |  |
| --- | --- | --- |
| 1 2 | 3.14159L // long double  6.02e23f // float |  |

Any of the letters that can be part of a floating-point numerical constant (e, f, l) can be written using either lower or uppercase letters with no difference in meaning.