n integer (pronounced IN-tuh-jer) is a whole number (not a fractional number) that can be positive, negative, or zero.

Examples of integers are: -5, 1, 5, 8, 97, and 3,043.

Examples of numbers that are not integers are: -1.43, 1 3/4, 3.14, .09, and 5,643.1.

The [set](https://searchsecurity.techtarget.com/definition/set) of integers, denoted ***Z***, is formally defined as follows:

***Z*** = {..., -3, -2, -1, 0, 1, 2, 3, ...}

In mathematical equations, unknown or unspecified integers are represented by lowercase, italicized letters from the "late middle" of the alphabet. The most common are *p*, *q*, *r*, and *s*.

The set ***Z*** is a *denumerable* set. Denumerability refers to the fact that, even though there might be an infinite number of elements in a set, those elements can be denoted by a list that implies the identity of every element in the set. For example, it is intuitive from the list {..., -3, -2, -1, 0, 1, 2, 3, ...} that 356,804,251 and -67,332 are integers, but 356,804,251.5, -67,332.89, -4/3, and 0.232323 ... are not.