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ceiling

Canonical name	Ceiling
Date of creation	2013-03-22 11:48:21
Last modified on	2013-03-22 11:48:21
Owner	yark (2760)
Last modified by	yark (2760)
Numerical id	17
Author	yark (2760)
Entry type	Definition
Classification	msc 26A09
Classification	msc 11-00
Synonym	ceiling function
Synonym	smallest integer function
Synonym	smallest integer greater than or equal to
Related topic	BeattysTheorem
Related topic	Floor

The *ceiling* of a real number is the smallest integer greater than or equal to the number. The ceiling of x is usually denoted by $\lceil x \rceil$.

Some examples: $\lceil 6.2 \rceil = 7$, $\lceil 0.4 \rceil = 1$, $\lceil 7 \rceil = 7$, $\lceil -5.1 \rceil = -5$, $\lceil \pi \rceil = 4$, $\lceil -4 \rceil = -4$.

Note that this function is not the integer part ($[x]$), since $\lceil 3.5 \rceil = 4$ and $[3.5] = 3$.

The notation for floor and ceiling was introduced by Iverson in 1962[?].

References

[1] N. Higham, Handbook of writing for the mathematical sciences, Society for Industrial and Applied Mathematics, 1998.