



planetmath.org

Math for the people, by the people.

monotonically decreasing

Canonical name	MonotonicallyDecreasing
Date of creation	2013-03-22 12:22:30
Last modified on	2013-03-22 12:22:30
Owner	akrowne (2)
Last modified by	akrowne (2)
Numerical id	8
Author	akrowne (2)
Entry type	Definition
Classification	msc 40-00
Synonym	monotone decreasing
Synonym	strictly decreasing
Related topic	MonotonicallyIncreasing

A sequence  $(s_n)$  is *monotonically decreasing* if

$$s_m < s_n \forall m > n$$

Similarly, a real function  $f(x)$  is monotonically decreasing if

$$f(x) < f(y) \forall x > y$$

Compare this to monotonically nonincreasing.

**Conflict note.** In other context, such as [?], this is called *strictly decreasing*. When this is the case, “monotonically nonincreasing” is instead called “monotonically decreasing.”

## References

- [1] “<http://www.nist.gov/dads/HTML/strictlyDecreasing.html>strictly decreasing,” from the NIST Dictionary of Algorithms and Data Structures, Paul E. Black, ed.