monotonic

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A sequence or function is said to be *monotonic* if it is

- monotonically increasing

- monotonically decreasing

- monotonically nondecreasing

- monotonically nonincreasing

Intuitively, this means that a monotone sequence can be thought of a "staircase" going either only up, or only down, with the stairs any height and any depth. The same goes for step functions. Smooth (analytic) monotone functions are like "slopes," either up or down at potentially varying steepnesess.