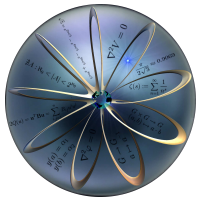

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one-sided continuity

Canonical name	OnesidedContinuity
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Classification	msc 26A06
Related topic	OneSidedLimit
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Related topic	OneSidedContinuityBySeries
Defines	continuous from the left
Defines	continuous from the right
Defines	from the left continuous
Defines	from the right continuous
Defines	continuous on closed interval

The real function f is *continuous from the left* in the point $x = x_0$ iff

$$\lim_{x \to x_0-} f(x) = f(x_0).$$

The real function f is *continuous from the right* in the point $x = x_0$ iff

$$\lim_{x \to x_0+} f(x) = f(x_0).$$

The real function f is *continuous on the closed interval* $[a, b]$ iff it is continuous at all points of the open interval (a, b), from the right continuous at a and from the left continuous at b.

Examples. The ceiling function $\lceil x \rceil$ is from the left continuous at each integer, the mantissa function $x - \lfloor x \rfloor$ is from the right continuous at each integer.