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When the limit of *f(x)* is non-existent but becomes either arbitrarily large or arbitrarily small as x approaches c, it is said that the limit of *f(x)* as x approaches c is infinite. To be clear, this does *not* mean that there *is* a limit for *f(x)* as x approaches c, rather that *f(x)* increases or decreases without bound. It is tempting to say that there *is* a limit, that the limit is the number infinity (or negative infinity). This is incorrect: the very fact that the number increases (or decreases) without a bound means that there is no real number that binds it. To say the limit is an infinite one means that *f(x)* increases (or decreases) indefinitely: forever. Infinity - signified by ∞ - simply represents the fact that no matter how big a number imaginable, one must simple add one and get a bigger number. Infinity is not a real number or an imaginary one – it’s a concept.