



Where is the function discontinuous?

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definition of continuity at a point

f(x) is continuous at x = c if

- 1. $\lim_{x\to c} f(x)$ exists (remember this means left hand = right hand)
- 2. f(c) exists
- 3. the answers from #1 = the answers from #2

$$\lim_{x \to c} f(x) = f(c)$$

definition of continuity on an interval

f(x) is continuous on the interval (a,b) if f(x) is continuous at every point in the interval

types of discontinuities hole (removable discontinuity)

jump discontinuity

infinite discontinuity

oscillating discontinuity

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continuous on the domain

intermediate value theorem for continuous functions