Source: [KBhMATH401Limits]

1 | Types of Discontinuity

Infinite Discontinuity (verticle asymtote)

Double Sided Limit: does not exist **Function**: not defined

$f(x) = \frac{x^2+2}{x^2-4} \; where \; x = 2$

Jump Discontinuity (gap)

Double Sided Limit: does not exist **Function**: defined

"a ceiling function" $f(x) = \lceil x \rceil \; where \; x = 3$

Point Discountinuity (hole)

Double Sided Limit: exists **Function**: not defined

$f(x) = \frac{x^6-1}{x^{10}-1} \; where \; x = 1$