Source: ⟦KBhMATH401Limits⟧

1 | **Types of Discontinuity**

1.1 | **Infinite Discontinuity (verticle asymtote)**

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

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

1.2 | **Jump Discontinuity (gap)**

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

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

1.3 | **Point Discountinuity (hole)**

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

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

Division by 0/infinite discontinutiy => undefined

Hole => not defined

Sq. Root Functions => not defined when x={negative number}