

## Limits

- $\lim_{(x,y) \rightarrow (0,0)} \left( \frac{\sin(x^2 + y^2)}{x^2 + y^2} \right)$

- Values

$x \backslash y$	-1.0	-0.5	-0.2	0	0.2	0.5	1.0
-1.0	0.455	0.759	0.829	0.841	0.829	0.759	0.455
-0.5	0.759	0.959	0.986	0.990	0.986	0.959	0.759
-0.2	0.829	0.986	0.999	1.000	0.999	0.986	0.829
0	0.841	0.990	1.000		1.000	0.990	0.841
0.2	0.829	0.986	0.999	1.000	0.999	0.986	0.829
0.5	0.759	0.959	0.986	0.990	0.986	0.959	0.759
1.0	0.455	0.759	0.829	0.841	0.829	0.759	0.455

## Limits

- $\lim_{(x,y) \rightarrow (0,0)} \left( \frac{x^2 - y^2}{x^2 + y^2} \right)$

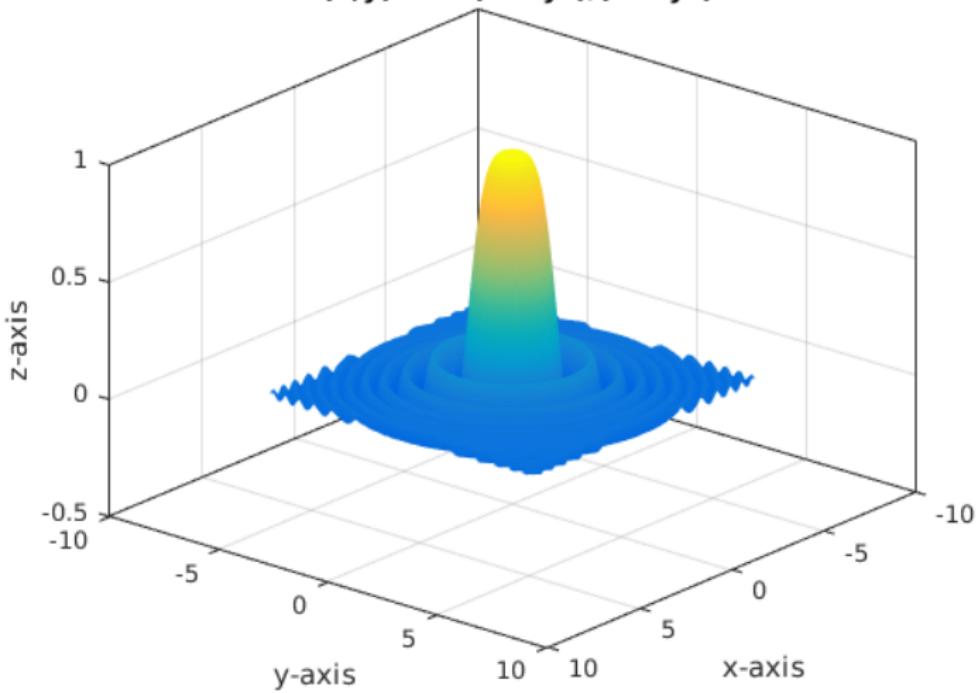
- Values

$x \backslash y$	-1.0	-0.5	-0.2	0	0.2	0.5	1.0
-1.0	0.000	0.600	0.923	1.000	0.923	0.600	0.000
-0.5	-0.600	0.000	0.724	1.000	0.724	0.000	-0.600
-0.2	-0.923	-0.724	0.000	1.000	0.000	-0.724	-0.923
0	-1.000	-1.000	-1.000		-1.000	-1.000	-1.000
0.2	-0.923	-0.724	0.000	1.000	0.000	-0.724	-0.923
0.5	-0.600	0.000	0.724	1.000	0.724	0.000	-0.600
1.0	0.000	0.600	0.923	1.000	0.923	0.600	0.000

## Limits

- $\lim_{(x,y) \rightarrow (0,0)} \left( \frac{\sin(x^2 + y^2)}{x^2 + y^2} \right)$
- Plot

$$f(x,y) = \sin(x^2+y^2)/(x^2+y^2)$$



## Limits

- $\lim_{(x,y) \rightarrow (0,0)} \left( \frac{(x^2 - y^2)}{x^2 + y^2} \right)$
- Plot

$$f(x,y) = (x^2 - y^2)/(x^2 + y^2)$$

