## Limits and Continuity

## Question

The table shows the values of a function a function $f(x, y)$. Do you think that the limit of $f(x, y)$ as $(x, y) \rightarrow(0,0)$ exists?

| $x \backslash y$ | -1.0 | -0.5 | -0.2 | 0 | 0.2 | 0.5 | 1.0 |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| -1.0 | 0.00 | 0.60 | 0.92 | 1.00 | 0.92 | 0.60 | 0.00 |
| -0.5 | -0.60 | 0.00 | 0.72 | 1.00 | 0.72 | 0.00 | -0.6 |
| -0.2 | -0.92 | -0.72 | 0.00 | 1.00 | 0.00 | -0.72 | -0.92 |
| 0 | -1.00 | -1.00 | -1.00 |  | -1.00 | -1.00 | -1.00 |
| 0.2 | -0.92 | -0.72 | 0.00 | 1.00 | 0.00 | -0.72 | -0.92 |
| 0.5 | -0.60 | 0.00 | 0.72 | 1.00 | 0.72 | 0.00 | -0.6 |
| 1.0 | 0.00 | 0.60 | 0.92 | 1.00 | 0.92 | 0.60 | 0.00 |

A. I think the limit exists, and I am confident.
B. I think the limit exists, but I am not confident.
C. I think the limit does not exist, but I am not confident.
D. I think the limit does not exist, and I am confident.

