

Check your understanding

26. Which of the following is not a practical way of showing that $\lim_{(x,y)\rightarrow(a,b)} f(x,y)$ exists?
- (a) Using the delta-epsilon definition of limit.
 - (b) Using properties of limits and continuous functions.
 - (c) Checking the limit along all curves that approach (a,b) .

Answer: (c)

Explanation: One can sometimes prove that a limit does NOT exist by finding two curves with different limits. However there is no way to check all possible curves to prove that a limit DOES exist.