

Check your understanding

25. Suppose we want to prove that $\lim_{(x,y) \rightarrow (0,0)} 10x = 0$. Given $\epsilon > 0$, which of the following δ will fulfill the definition of limit? (Select all that apply.)

(a) $\delta = 10\epsilon$.

(b) $\delta = \epsilon$.

(c) $\delta = \epsilon/10$.

(d) $\delta = \epsilon/100$.

(e) $\delta = 0$.

Answer: (c) and (d).

Explanation: δ will fulfill the definition of limit if and only if $0 < \delta \leq \epsilon/10$.