

Re: Distance between a closed and a compact set is positive.

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In article <1146159716.333637.184940@xx>, alencar1980 <alencar1980@xxxxxxxxxxx> wrote:

Dear all,

I'm stuck in the following problem.

Let  $V$  be a normed space. If  $C$  is a closed subset of  $V$  and  $K$  a compact subset of  $V$  such that  $C \cap K = \emptyset$  then there exist a  $r > 0$  such that  $\|c - k\| \geq r$  for all  $c \in C$  and  $k \in K$ .

The slick way uses the fact that a continuous real-valued function on a compact set has a minimum value.

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