**ANALYSIS II**
**QUIZ 1**

Jan 17, 2020 (in tutorial)

Name: _____

The Quiz has two questions. The second question is on the next page.
Let $\mathbf{K} \in \{\mathbf{R}, \mathbf{C}\}$ and let $(V, \| \|)$ be a normed linear space over $\mathbf{K}$.

(1) Show that

$$\Big| \|x\| - \|y\| \Big| \leq \|x - y\| \qquad (x, y \in V).$$

(2) Show that $\| \| : V \to \mathbf{R}$ is continuous.