

Quiz

Name:

1. State the definition of " $\lim_{n \rightarrow \infty} a_n = L$ ". In other words, state the definition of convergence of a sequence of real numbers.

2. Give an example of each of the following.
 - (a) an uncountable, proper subset of the real numbers \mathbb{R}

 - (b) a countable, proper subset of the real numbers \mathbb{R}

 - (c) a non-constant sequence of real numbers that converges to its supremum

 - (d) a non-constant sequence of real numbers that converges, but not to its supremum

3. State the Bolzano-Weierstrass theorem.