

**MATH 150A-QUIZ 4, WINTER 2020**

Name: \_\_\_\_\_

1. State the definitions of *limit point*, *limit set*, *closure*, and *closed set*.

2. Consider the set of integers  $\mathbb{Z}$ . Show that  $\mathbb{Z}$  is closed by showing that  $\mathbb{Z}' = \emptyset$ . Does it violate the statement of Bolzano Weierstrass Theorem (for set): *for every bounded infinite set  $S \subset \mathbb{R}$ , there is a limit point of  $S$* . Why?