

Mathematics 300

Quiz 1

Name: _____

You must show your work to get full credit.

1. Let x be an integer

(a) Define x is *even*.

(b) Define x is *odd*.

2. Prove or give a counterexample: If x is even, then $x^2 + 1$ is odd.

3. Prove or give a counterexample: If x is even, then $x^3 + 5$ is odd.