Quiz 12   Name:_____

You must show your work to get full credit.

1. A proof of the statement: "If $n + 1$ is odd, then $n^2 + 1$ is even" starts with

Proof. Assume if $n + 1$ is odd, then $n^2 + 1$ is even. ...

What is wrong with this?

Proposition. *If $3n^2 + 1$ is even, then n is odd.*

2. What is the contrapositive of the proposition?

3. Prove the contrapositive.