

Mathematics 300

Quiz 18

Name: _____

You must show your work to get full credit.

We have proven the following several times.

Proposition 1. *For any integers n , if n^2 is even, then n is even.*

1. Use this proposition to prove $\sqrt{2}$ is irrational.

2. Prove: If β is irrational, then so is $\frac{\beta + 2}{\beta - 1}$.