Quiz – Week 4 NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Prove: If n is odd then n2 + n is even
2. Prove: If 5n + 6 is odd then n is odd
3. Prove: if a is odd and b is even then a · b is even.
4. If you are preparing to prove the following by Contradiction, tell me what would you take as your assumptions and what would you be trying to show.

“If a > 0 and b < 0 then a · b < 0 “ (You do not have to prove it!!!)

1. Prove or Disprove: If a < 0 then a2 < 0
2. Prove or Disprove: There exists two irrational numbers whose product is rational.