Quiz 5: November 1, 2018

Left Neighbor: _____ Right Neighbor: _____

Name: _____ Student ID: _____

Section TA: _____

This is a closed book quiz

1. **(3 points)** Prove by contradiction that if n is an integer, and n is odd, then n^2 is odd.

2. **(5 points)** Prove that the product of any five consecutive integers is divisible by 120. (For example, the product of 3,4,5,6 and 7 is 2520, which is equal to 120 times 21.

3. **(2 points)** Prove or disprove that if a and b are natural numbers, then $a + b < ab$.