Math 212 Homework 3

Your name goes here

Due February 20, 2019

For Theorem G, fill in the blank and supply the proof.

Theorem G. Let n be an integer such that n^2 is even. Then n^2 is _____.

Proof. □

Theorem H. Suppose that $n+1$ pieces of mail are delivered to n mailboxes. Then some mailbox contains at least two pieces of mail.

Proof. □

Statement I. The difference of two perfect squares is never prime. (Recall that a prime is a natural number $n > 1$ such that the only positive integer factors of n are 1 and n.)