

Math 465 - Spring 2021

Homework 1

Due February 4th, 2021

Obvious is the most dangerous word in mathematics.

— E. T. Bell

- (1) Use induction to prove that $1 + 3 + 5 + \cdots + (2n - 1) = n^2$.
- (2) Prove that if $a \mid b$ and $b \mid c$ that $a \mid c$.
- (3) Prove that $\gcd(n, n + 1) = 1$ for all integers n .
- (4) 2-1.4, 2-1.5, 2-2.1(a-c) (From the textbook).