#58 Theorem:

The difference of the squares of any two Consecutive integers is odd.

Proof:

Suppose m and n are two Arbitrarily Choasen Consecutive integers K, and K+1.

By Substitutoon,

$$n^2 - m^2 = (K^2 + 2K + 1) - K^2 \qquad \text{- Basic Algebra}$$

Let some integer S be equal to the equation

$$S = (K^2 + 2K + 1) - K^2$$

By Basic Algebra

$$S = 2K + 1 \qquad \text{- Definition of Odd}$$

Thus, S is odd

QED