

## Mathematics 546

### Quiz #3

Name: \_\_\_\_\_

1. Prove that there are infinitely many prime integers. (You may use the Smallest Factor Theorem, *i.e.* that if  $N > 2$  the smallest factor of  $N$  that is larger than 1 is a prime.)

2. Find the greatest common divisor of 180 and 744.

$\gcd(180, 744) =$  \_\_\_\_\_