# MATH 233
# Fall 2018
# Quiz #3 A

***Duration:* 50 minutes.**
***Remark:* Show your thinking/work. Do not just write a number or a formula as a result.**

1. Prove that if a | b and a | c then a | b+c.

2. Prove that there is no greatest prime (There is a prime larger than any given prime).

(**Hint:** Let p be a large prime number. Consider p+1 which is not prime. Now find a prime number larger than p+1. For example, consider (p+1)! + 1.