

Math215: HW2

1. Assume that a, b and c are integers. Prove that

$$(a|b \text{ or } a|c) \text{ implies } a|bc$$

2. Use order axioms to prove that for real numbers a, b, c and d

$$(a < b \text{ and } c < d) \text{ implies } (a + c) < (b + d)$$

3. Prove by contradiction that there does not exist a largest integer.