Number Theory HW Week 4

1. Show that does not imply that .
2. Show that implies .
3. Find the remainder when is divided by 7.
4. Show that 39 divides into .
5. Show an integer is divisible by 2 iff the units digit is 0,2,4,6,8.
6. Show an integer is divisible by 3 iff the sum of the digits is divisible by 3.
7. Show that has units digit of 3, 7, or 9.
8. Solve .

1,2,5 worth 3 pts

7 worth 4 pts

3,4,6,8 worth 5 pts