

## Mathematics 174

Quiz # 8

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

*You must show your work to get full credit.*

1. Define  $d$  is a ***divisor*** of  $n$  where  $d$  and  $n$  are integers.
2. Show that if  $n$  is odd that  $n^2 - 1$  is divisible by 4.
3. Show that if  $a$  and  $b$  are divisible by  $d$  then so is  $3a + 4b$ .