

## Mathematics 300

Quiz 20

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

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

1. Show that for any integer  $n$  that  $3 \mid n(n-1)(n-2)$ .
2. Show that if  $a$ ,  $b$ , and  $c$  are odd integers then, for any integer  $n$  the number  $an^2 + bn + c$  is odd.