Mathematics 300

Quiz 20 **Name:**_____

You must show your work to get full credit.

Division Algorithm. *Let a and b be integers with b positive. Then there are unique integers q and r such that*

$$a = qb + r \qquad 0 \leq r < b.$$

□

1. Use the divisor algorithm to and proof by cases to show For any integer n the number $n(n-1)(n+1)$ is divisible by 3.