

Name: _____

Quiz #3

Math 220

October 9, 2003

1. [5 points] Consider the statement:

For all integers m and n , if m is odd and n is even, then mn is even.

- (a) Write down the converse and contrapositive of this statement:

Converse:

For all integers m and n , _____ .

Contrapositive:

For all integers m and n , _____ .

- (b) Of the original statement, its converse, and its contrapositive, which are true statements?

2. [5 points] Prove the following statement:

For all integers a , b , c , and d , if $ab + bc = cd + ba$, then $c(b - d) = 0$.