Name: _____

MAD 3104 Discrete Mathematics **Quiz 1c** 6 Sep 1995

Show **ALL** work for credit; be neat; and use only **ONE** side of each page of paper.

1. A is the set of positive integers and $aRb \iff a \cdot b$ is odd.

A. Give counter-examples to show R is not reflexive and not anti-symmetric.

B. Give proofs to show R is symmetric and transitive.

In Problem 2 For the given A and R and each of the properties: A. reflexive, B. symmetric, C. anti-symmetric and D. transitive, either prove R has the property or give a counter-example to show R fails to have that property.

2. A is the set of real numbers and $aRb \iff 0 \leq a - b \leq 2$.