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 $aRb \iff 0 \leq a - b \leq 2$. 