CSE 321: Discrete Structures
March 2, 2007

Assignment #8
Due: Wednesday, March 7

Problems:

1. For the relation $R = \{(b, c), (b, e), (c, e), (d, a), (e, b), (e, c)\}$ on $\{a, b, c, d, e, f\}$, compute the following.
   (a) The reflexive closure of R.
   (b) The symmetric closure of R.
   (c) The transitive closure of R.
   (d) The reflexive-transitive closure of R.
2. A relation R is called *circular* if aRb and bRc imply that cRa for every a, b, and c. Prove that R is reflexive and circular if and only if it is an equivalence relation.
3. Section 8.5, exercise 64 [5th edition: Section 7.5, exercise 50]