Equivalence Relations

3.2.2: Let $A = \{1, 2, 3\}$. List the ordered pairs, and draw the digraph of a relation on A with the given properties.

(a) not reflexive, not symmetric, and not transitive

(b) reflexive, not symmetric, and not transitive

(c) not reflexive, symmetric, and not transitive

(d) reflexive, symmetric, and not transitive

(e) not reflexive, not symmetric, and transitive

3.2.17: Prove that if R is a symmetric, transitive relation on A and the domain of R is A, then R is reflexive on A.