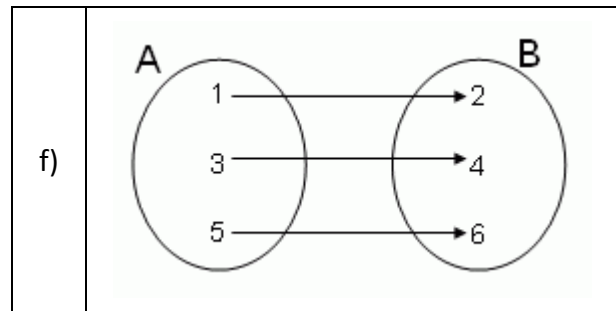


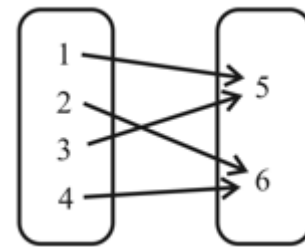
Tutorial 3 (Questions)

1. Name the following relations

a)	
b)	
c)	
d)	
e)	



2. Is the following a relation? Why?



3. Determine which of the reflexive, symmetric, and transitive properties are satisfied by the given relation R defined on a set S . If the property is not satisfied give the reason why.

a) $S = \{1, 2\}$ and $R = \{(1, 1), (1, 2), (2, 1), (2, 2)\}$

b) $S = \{1, 2, 3\}$ and $R = \{(1, 1), (1, 3), (2, 2), (2, 3), (3, 1), (3, 2), (3, 3)\}$

4. Let $A = \{1, 2, 3, 4\}$ and $B = \{a, b, c\}$ and define the following two relations:

a) $r : \{(a, a), (b, b), (a, b), (b, a)\}$ (on B)

b) $s : 1 \sim 1, 2 \sim 2, 3 \sim 3, 4 \sim 4, 1 \sim 4, 4 \sim 1, 2 \sim 4, 4 \sim 2$ (on A)