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WORKSHEET 8

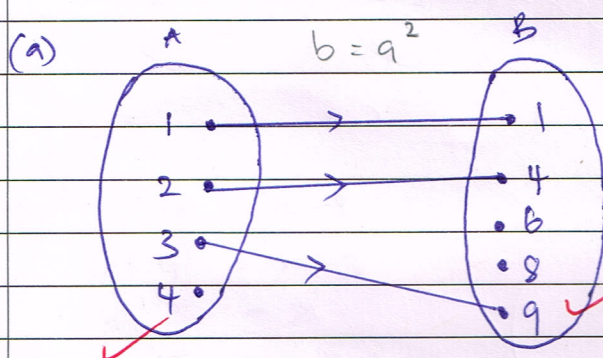
① Given set $R = \{(0,0), (0,1), (0,3), (1,0), (1,1), (2,2), (3,0), (3,3)\}$ on the set $A = \{0,1,2,3\}$

- (a) Relation R is ~~not~~ ^{reflexive} ~~irreflexive~~ since $(0,0), (1,1), (2,2), (3,3)$ is in R
 ii) R is ~~symmetric~~ since $(0,1) \in R$, then $(1,0) \in R$. ~~aRb then bRa in R~~
 iii) R is ~~transitive~~ since $(0,3) \in R$ and $(3,0) \in R$, then $(0,0) \in R$.
~~Since aRb, bRc , then aRc in R .~~

(b) R is not asymmetric since $(0,0), (0,1), (0,3), (1,0), (1,1), (2,2), (3,0), (3,3)$ is in R .
 Whenever aRb then bRa .

② $A = \{1,2,3,4\}$

$B = \{1,4,6,8,9\}$



$R = \{(1,1), (2,4), (3,9)\}$

(b) R is not equivalence relation because R is not reflexive, not symmetric and not transitive relation.

You need to explain
 also if not reflexive,
 not...
 why??

24/1/19