Quiz #4

Due: July 14th, 2020 by 11:59 pm (MST)

1. (10 Points) Consider the relation $R = \{(0, 2), (1, 3), (2, 4), (3, 5)\}$ on the set $A = \{0, 1, 2, 3, 4, 5\}$.

   (a) Describe the relation in set builder notation.

   $\{(x, y)| \text{ y-x=2}\}$

   (b) Specify true or false for each of the following properties. If false, list the ordered pairs that would need to be added to satisfy the property.

   - R is Reflexive

     False. $(1, 1), (2, 2), (3, 3), (4, 4), (5, 5)$

   - R is Symmetric

     False. $(2, 0), (3, 1), (4, 2), (5, 3)$

   - R is Antisymmetric

     True

   - R is Transitive

     False. $(0, 4), (1, 5)$