

Name: _____

Homework 8: Relations & Functions**Due date: 04/13/2021 (Tuesday)**

Print and write work on this worksheet. Write clearly and show **all** work for full credit.

1. Given sets $A = \{a, b, c, d, e\}$ and $B = \{1, 3, 5\}$, answer the following:
 - a. Show a relation, ${}_B R_B$, that is both reflexive and symmetric. (3 points)
 - b. Show a non-empty, partial function, ${}_A R_B$ (3 points)
 - c. Show a total function, ${}_A R_B$, that is not onto. (3 points)
 - d. Show a total, one-to-one function ${}_B R_A$ (3 points)
 - e. Show a relation, ${}_A R_A$, that is not transitive, and show why it is not transitive. (5 points)