CSE 015: Discrete Mathematics
Fall 2019
Homework #4
Solution

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Lab CSE-015-03L M 7:30-10:30pm

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1. **Question 1:**

   (a) Domain: set of all non negative numbers Range: set of all real numbers
   (b) Domain: set of all non negative numbers Range: set of all non negative numbers except 1
   (c) Domain: the set of bit strings. Range: the set of all non negative numbers.
   (d) Domain: the set of bit strings. Range: the set of all non negative numbers.

2. **Question 2:**

   (a) onto
   (b) not onto
   (c) onto
   (d) onto
   (e) not onto

   Question 3:

   (a) phone numbers are one if students don't share a number.
   (b) student IDs are one to one to accurate identify and catalog students.
   (c) the final grade in a class is one to one if every student gets a different grade letter.
   (d) the students home town is one to one if every student comes from a different town.

   Question 4:

   (a) is a bijection
   (b) is not a bijection
   (c) is not a bijection
   (d) is a bijection