Homework 7

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1A. A function is only R to R if all elements of the range set are real. The reciprocal of 0 is undefined.

1B. This function maps to the set of imaginary numbers for any number less than 0.

1C. This function maps to 2 elements, negative and positive, for all numbers.

3A. No. Multiple zeroes make the condition vague to only map to one member of the range set.

3B. Yes. This will always be a unique value.

3C. No. There's no condition for a string of all 0's, making the function undefined.

5A. Domain: all bit strings. Range: all integers.

5B. Domain: all bit strings. Range: all even integers.

5C. Domain: all bit strings. Range: all integers from 1 to 7.

5D. Domain: all integers. Range: all perfect squares.

7A. Domain: all possible pairs of integers. Ranga: all integers.

7B. Domain: all integers. Range: all integers from 0 to 9. (Not 10, at least one number has to be there)

7C. Domain: all bit strings. Range: all integers.

7D. Domain: all bit strings. Range: all integers.

9A. 1

9B. 0

9C. 0

9D. -1

9E. 3

9F. -1

9G. 2

9H. 1

10A. Yes.

10B. No. 2 elements map to b.

10C. No. 2 elements map to d.

11A. Yes.

11B. No. No elements map to a.

11C. No. No elements map to to a.

12A. Yes.

12B. No. There are dupicates in the image set.

12C. Yes.
12D. Yes.
13A. Yes.
13B. Yes.
13C. Yes.
13D. Yes.