10/7/2026 Fall 2026, Discrete Structures I Quiz 5 Sitaraman

Howard University Math Department

Instructions:

PLEASE PROVIDE STEP BY STEP EXPLANATIONS

WRITING ONLY ANSWERS WILL NOT GET FULL CREDIT

Time Limit 30 minutes

Please read the questions carefully before answering

1. (a) (8 points) Show that the following is 1-1 from the nonzero real numbers to all real numbers, i.e, $f : \mathbb{R} - \{0\} \to \mathbb{R}$.

   (b) (7 points) Find its inverse:

$$f(x) = \frac{2 - x}{x}.$$

2. (10 points) Is the function in problem 1 onto?

3. (10 points) Find the GCD of 35 and 10 using Euclidean algorithm.