

CSCI 3236 Homework #1
Due date: August 28, 2022 (Sunday), 11:59pm

1. Let $X = \{a, b, c\}$ and $Y = \{1, 2\}$.
 - a) List all the subsets of X .
 - b) List all the members of $X \times Y$.
 - c) List all total functions from Y to X .
2. Prove that the set of even integers is denumerable.
3. Prove that the set of real numbers in the interval $[0, 1]$ is uncountable. Hint: Use the diagonalization argument on the decimal expansion of real numbers.

How to hand in the assignment

When you have finished your assignment, you will upload (submit) it to the same assignment area where you found it. I remind you that if you do not submit the assignment before the due date, you will not be able to submit it.

1. Complete the assignment in a MS word file or PDF file.
2. Return to the dropbox folder for this assignment.
3. Look for the “Add a File” button in the Submit Files area.
4. Browse for the assignment that you have on your computer, and select it so that it uploads to the assignment area.
5. Click “Submit”.