

# COS 487: Problem Set X

Your Name Here

Collaborators: Name Your Collaborators Here

Submission Date Here

## Problem 1

This is an enumeration:

1. This is how you write  $\mathbb{N}$ ,  $\mathbb{R}$ ,  $\mathcal{P}(\mathbb{N})$ ,  $\varepsilon$ ,  $\mathbf{c}$  and  $\aleph_0$ .
2. This is a boolean function  $f : \{0, 1\}^* \rightarrow \{0, 1\}$ .
3. This is a set  $L = \{w \in \Sigma^* : w \text{ has odd length}\}$ .
4. This is an equation

$$a + a \cdot r + a \cdot r^2 + \dots + a \cdot r^{n-1} = \sum_{k=1}^{n-1} ar^k = a \left( \frac{1 - r^n}{1 - r} \right).$$

5. This text is in **bold** and this text is *emphasized*.

**Definition 1** *This is a definition.*

**Theorem 1** *This is a theorem.*

## Problem 2

- 1) Answer to Problem 2(A) here.
- 2) Answer to Problem 2(B) here.