Math 160B Homework 1 January 10, 2020

Name: _____

Pid: _____

1. (10 points) Let $S \subseteq \mathbb{N}$ be a nonempty set. Show that S is decidable iff there is a funciton $f : \mathbb{N} \to \mathbb{N}$ such that f is computable, f is nondecreasing, and Im $f = S$.

2. (10 points) Let $A, B \subseteq \mathbb{N}$ be enumeratable sets. Show that $A \times B$ is enumeratable.