Here is the setup for the last 3 questions on HW 8

5. Let $\mathcal{L}_{inf}$ be {m | m encodes a TM that accepts infinitely many strings}. Is $\mathcal{L}_{inf}$ RE?

   No; reduce the complement of the halting language to this. Given an (M, w) pair build M'
   so that M' accepts infinitely many strings if and only if M does not halt on w.

6a. Prove that $\mathcal{L}_{hippy-dippy}$ is not Recursively Enumerable. You might try reducing the complement of the
   halting langue to $\mathcal{L}_{hippy-dippy}$.

   Given (M, w) build M' so that M' accepts all strings if and only if M does not halt on w.

6b. Prove that $\mathcal{L}_{skeptical}$ is not Recursively Enumerable

   Reduce the complement of the universal language to this. Given (M, w) build M' so that M'
   does not accept at least one string if and only if M does not accept w.