CS 310 Homework 8
DUE: **Dec 2, 5 pm**

From the Book:
Please type your answers and email them to me along with the JFLAP files below. The answers to these questions can be in the body of the email, they do not need to be in an attached document. *The questions marked with a star are not required and will not be graded, but are encouraged as practice problems for the Final Exam.

p 160
3.9 a
3.15 b – e (you can use the given answer to 3.15 a as a guide if you get stuck).
*3.16 b - d
*3.20

p 182
Hint: you may find it useful to use TM built to prove various theorems to solve these problems.
4.3
4.7
4.19
*4.20

p 294
7.1
7.5
7.9
*7.27

Write an algorithm you can implement on a Turing Machine that decides the language:
{ A | A is a prime number in base 1 }
If you build a multi-tape machine, you may use the stationary, S, extension.

Submit JFLAP files:

Please produce a PUNetID_cs310Hmwk8.tar.gz or .zip file containing the following JFLAP file(s) and email it to me before 5pm on Dec 2.

    Stay_PUNetID.jff

Build a two tape Turing Machine that reads the letter *a* from the input tape and moves the read/write head on the input tape one space to the right and keeps the read/write head of the second tape in the same location. Do not alter the contents of the second tape. You may not use JFLAP's S movement for this :)

Write up the algorithm you will implement and submit it with the answers to the questions above.

    Prime_PUNetID.jff

*Build the Prime Turing machine from above