

**Due MONDAY, 10/31/16**

## **CSCI 48400** **Assignment 11**

### **I. Pencil and paper work from the textbook (for Instructor)**

Section 11.1

#2 (solution is given in the book, please read, you don't need to turn anything in)

#7 (prove or disprove)

#16

#17

### **I. Pencil and paper work from the textbook (for TA)**

Section 11.1

#12 (also prove or disprove the statement for  $L_1 - L_2$ )

#13

Section 11.2

#2 Write the Turing machine as a set of transitions, not as a directed graph (although you could try your TM on JFLAP to be sure it works). Hand in both your TM instructions and the grammar you get using the algorithm given in this section. You can limit your productions to those useful for this particular Turing machine. Use B for blank. Be sure to show the derivation for 0101.

Section 11.4

#1 The point of this problem is to prove proper inclusion. (In addition, give an example of something outside the largest set.) Use the diagram on the next page and fill in the blanks with an example or theorem that proves proper inclusion. You can just say something like Example 8.4 (or whatever) but please also include the page number.

### **II. Use JFLAP to test your solutions to these problems from the textbook and turn in the JFLAP files (clearly named). Remember to add a Word doc with images of your JFLAP files.**

Section 11.3

#2b

#2c (he gives a solution in the book, see if you can get one with fewer productions)

### **III. Use JFLAP to test your solution to the following from the JFLAP Activities.pdf**

Section 2.10, #3

**Diagram for Section 11.4, Exercise #1.**

