CECS 211 - LAB 8
LTSpice Intro RC Time Constant

NAME: POSSIBLE POINTS: 10

STUDENT ID:

COURSE SECTION:

DIRECTIONS:

Using LTSpice, Simulate a Capacitor with:

10V DC Voltage Source (We will pulse it on and off to see the effect on current)
470ohm Resistor in series with the Capacitor
10uF Capacitor

For the DC Voltage Source use a voltage source and change the function to PULSE. We want 50ms before the voltage goes high (10v) and then wait 50ms second before the voltage goes back to low (0v). Set up the simulation command to stop exactly after 150ms.

On the Waveform, show:

- Show the voltage applied to the circuit
- Show the voltage across the Capacitor
- Show the current through the Capacitor

Calculate the following:
Max Voltage across the capacitor after fully charged:

RC Time Constant:

How many Time constants until the Max Vc is reached:

Time from when the pulse goes high until Max Vc is reached:

RC Time Constant	% of Max V	Voltage at each RC	Measured Voltage at each RC
1			
2			
3			
4			
5			