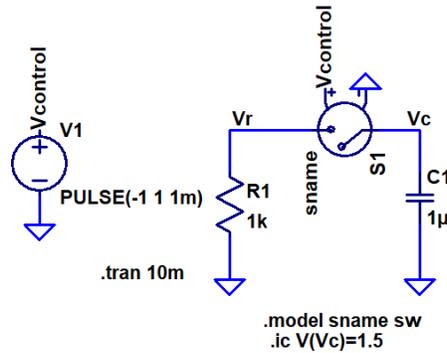
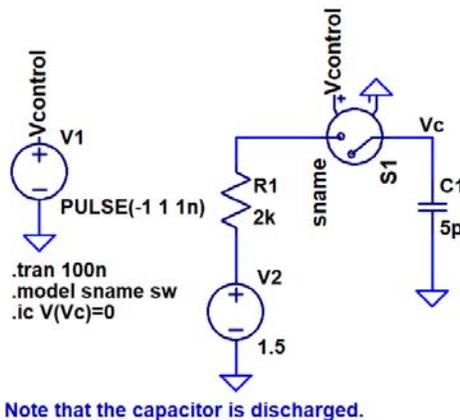


Show your work for credit!

- Hand calculate  $V_c$  and  $V_r$  in the following circuit. Compare your hand calculations to simulation results. Note that the switch closes at 1 ms. Make sure you understand how to use switches since we'll use them often. (4 points)



- Write the equation describing the voltage across the capacitor in the following circuit. Use LTSpice to verify your answer. (3 points)



- Write the equations describing the voltage across the capacitor,  $V_c$ , in the following circuit for both the rising and falling edges of the input pulse. Again, use LTSpice to verify your answer. (3 points)

