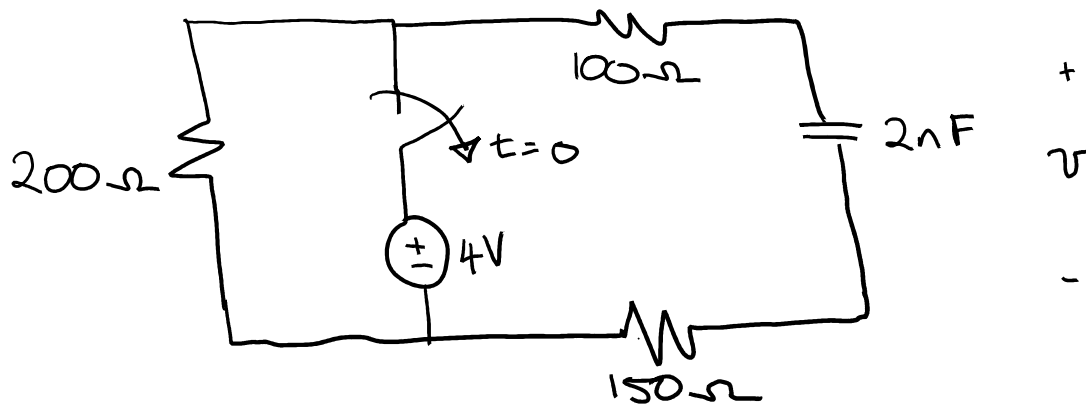Name: Student ID:

Pre-tutorial 5 Questions (to be attempted before class on May 17th, 2019)

Chapter 8, Ex 20: Source-free RC circuit

The switch drawn in the circuit below has been closed for such a long time that any transients which might have arisen from first connecting the voltage source have disappeared.

a) Determine the circuit time constant

b) Calculate the voltage $v(t)$ at $t = \tau, 2\tau,$ and 5τ

Chapter 8, Ex 49: Driven RL circuit

The circuit shown below is powered by a source which is inactive for t < 0. Obtain an expression for i(t) valid for all t.