

Sinusoidal Steady-State Response of an RC Circuit

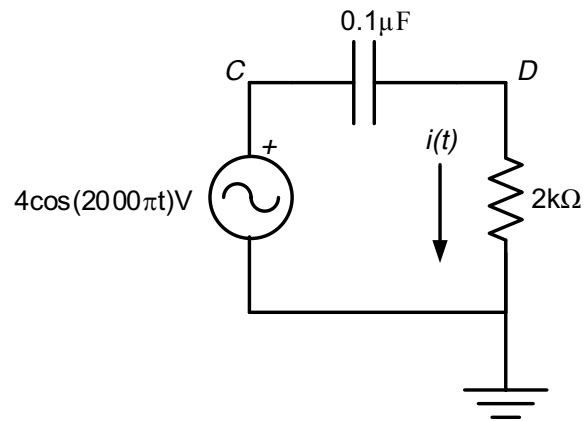
Name _____

Grade _____/10

Introduction

This experiment investigates the magnitude and phase of voltages in a series RC circuit. These measurements will be correlated with the appropriate circuit theory. Phase angles will be measured in two ways – by reading the time difference of zero-crossings in the time domain and by the Lissajous pattern method.

Solve for the current $i(t)$ in the circuit shown.
Express your answer in polar, rectangular, and sinusoidal forms.



Solve for V_D and express your answer in polar, rectangular, and sinusoidal forms.