Reading Assignments
Chapter 5 and Appendix A of Hambley textbook

Problem 1: Phasor Practice

Hambley P5.22
Consider the phasors shown below. The frequency of each signal is \( f = 200\text{Hz} \). Write a time domain expression for each voltage in the form \( V_m\cos(\omega t+\theta) \). State the phase relationships between each pair of these phasors.

Problem 2: Phasor diagram

Hambley 5.25
Supposed that \( v_1(t) = 100\cos(\omega t+45^\circ) \) and \( v_2(t) = 150\cos(\omega t+60^\circ) \). Use phasors to reduce the sum \( v_s(t) = v_1(t) + v_2(t) \) to a single term of the form \( V_m\cos(\omega t+\theta) \). Draw a phasor diagram showing \( V_1, V_2, \) and \( V_s \). State the phase relationships between each pair of these phasors.

Problem 3 Simple Complex Impedance

Hambley P5.43
Find the complex impedance of the network shown for \( \omega = 500 \). Repeat for \( \omega = 1000 \) and 2000.
Problem 4 Nodal analysis with phasors

Hambley P.5.54

Solve for the node voltage $V_1$ shown