

Special Problem II.A-51

Carefully consider a signal of the form:

$$v_o(t) = 1.0 \cos \left[2\pi t (4000 + Bt + At^2) \right]$$

Where A and B are some **unknown** constants.

But, the **frequency** of this signal is known to be:

$$\omega(t) = 8000\pi + 2\pi t + \pi t^2$$

Determine precisely (i.e., without any unknowns!) the **relative phase** $\phi_r(t)$, and **carrier frequency** ω_0 of this signal.