

**Chapter 9, Problem 6.**

For the following pairs of sinusoids, determine which one leads and by how much.

(a)  $v(t) = 10 \cos(4t - 60^\circ)$  and  $i(t) = 4 \sin(4t + 50^\circ)$

(b)  $v_1(t) = 4 \cos(377t + 10^\circ)$  and  $v_2(t) = -20 \cos 377t$

(c)  $x(t) = 13 \cos 2t + 5 \sin 2t$  and  $y(t) = 15 \cos(2t - 11.8^\circ)$