Chapter 9, Problem 76.

For the following pairs of signals, determine if v_1 leads or lags v_2 and by how much.

(a) $v_1 = 10\cos(5t - 20^o)$, $v_2 = 8\sin 5t$

(b) $v_1 = 19\cos(2t + 90^o)$, $v_2 = 6\sin 2t$

(c) $v_1 = -4\cos 10t$, $v_2 = 15\sin 10t$