

**Chapter 9, Problem 17.**

Two voltages  $v_1$  and  $v_2$  appear in series so that their sum is  $v = v_1 + v_2$ . If  $v_1 = 10\cos(50t - \pi/3)$  V and  $v_2 = 12\cos(50t + 30^\circ)$  V. Find  $v$ .