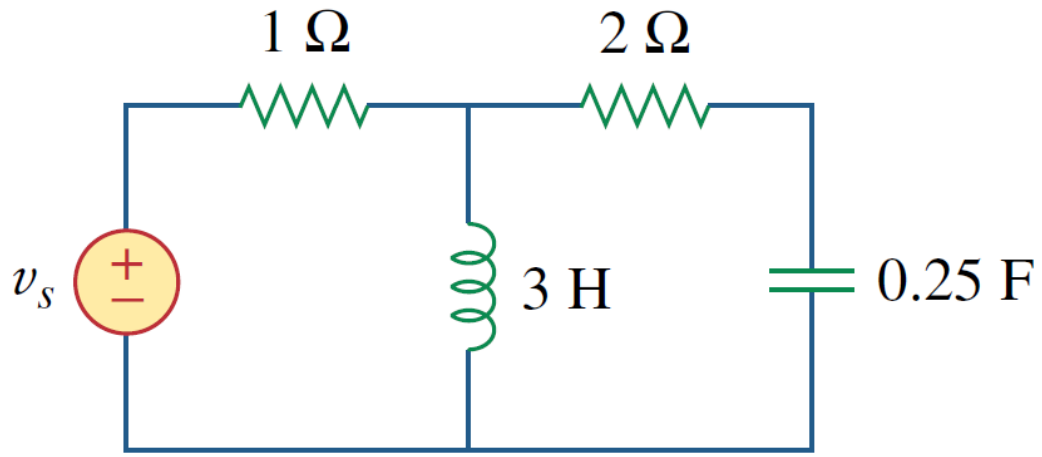
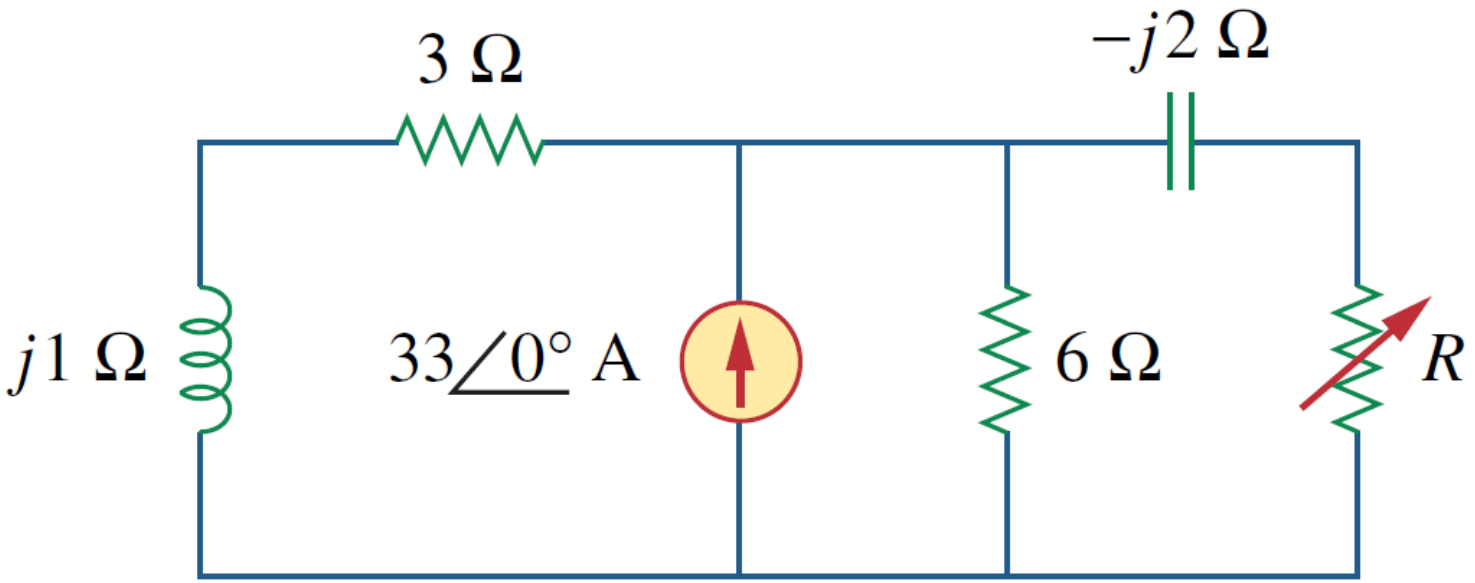
Assignment 8

Assuming that $v_s = 8\cos(2t - 40°)$ V in the circuit of Fig. 11.37, find the average power delivered to each of the passive elements.



11.19 The variable resistor R in the circuit of Fig. 11.50 is adjusted until it absorbs the maximum average power. Find R and the maximum average power absorbed.



11.51 For the entire circuit in Fig. 11.70, calculate:

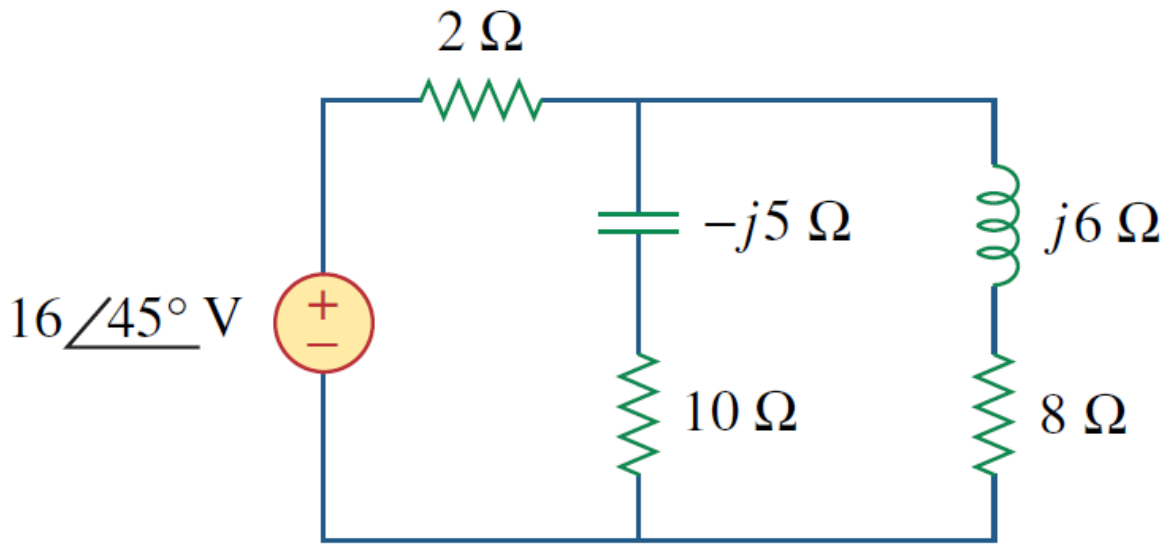
(a) the power factor

(b) the average power delivered by the source

(c) the reactive power

(d) the apparent power

(e) the complex power



11.74 A 120-V rms 60-Hz source supplies two loads connected in parallel, as shown in Fig. 11.89.

(a) Find the power factor of the parallel combination.

(b) Calculate the value of the capacitance connected in parallel that will raise the power factor to unity.