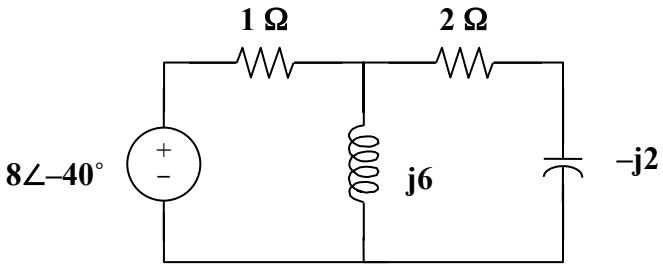
Chapter 11, Solution 5.

Converting the circuit into the frequency domain, we get:



$$I_{1\Omega} = \frac{8\angle -40^\circ}{1 + \dfrac{j6(2-j2)}{j6+2-j2}} = 1.6828\angle -25.38^\circ$$

$$P_{1\Omega} = \frac{1.6828^2}{2}1 = \underline{1.4159\,\text{W}}$$

$$P_{1\Omega} = \mathbf{1.4159\ W}$$

$$P_{3H} = P_{0.25F} = \mathbf{0\ W}$$

$$|I_{2\Omega}| = \left|\frac{j6}{j6+2-j2}1.6828\angle -25.38^\circ\right| = 2.258$$

$$P_{2\Omega} = \frac{2.258^2}{2}2 = \underline{5.097\,\text{W}}$$

$$P_{2\Omega} = \mathbf{5.097\ W}$$