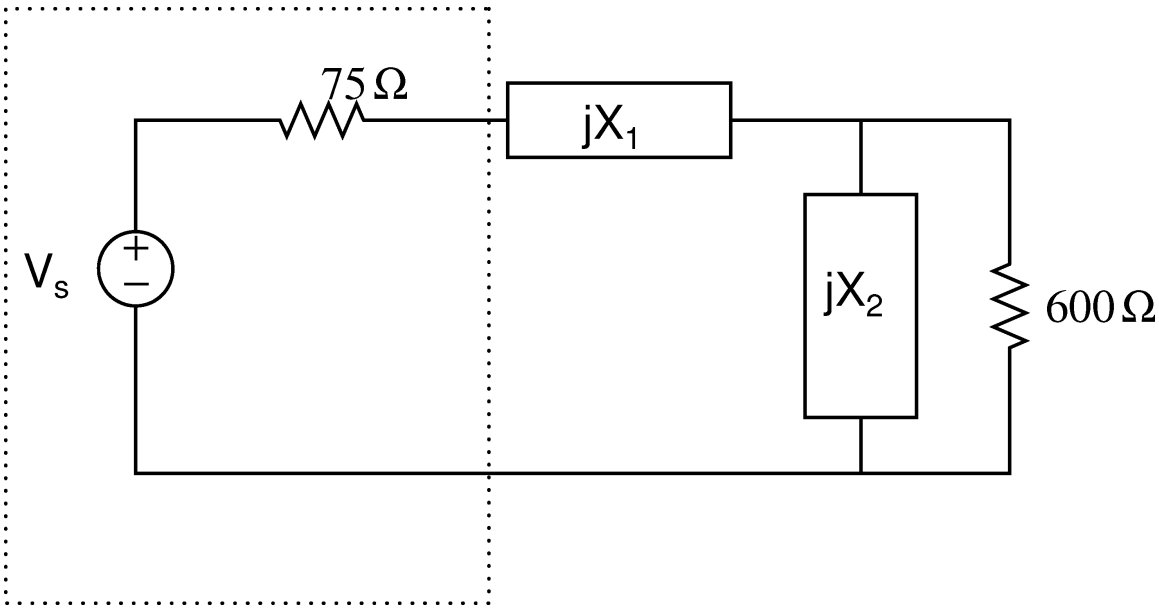
Modification of 8-65



The above represents an AC circuit design for balancing a load in AC. The only power supply available has an internal resistance of 75Ω. The load has a resistance of 600Ω. You want to deliver the maximum power possible to the load. By properly selecting X_1 and X_2, one can deliver the maximum amount of power to the load. This is done by making the source's output impedance look like 75 + 0jΩ. Select X_1 and X_2 to accomplish this.

Once this is done, select the capacitors and inductors needed at $\omega = 10^6$ rad/s.