Chapter 11, Problem 42.

A 110-V rms, 60-Hz source is applied to a load impedance Z. The apparent power entering the load is 120 VA at a power factor of 0.707 lagging.

(a) Calculate the complex power.
(b) Find the rms current supplied to the load.
(c) Determine Z.
(d) Assuming that $Z = R + j\varpi L$, find the values of R and L.