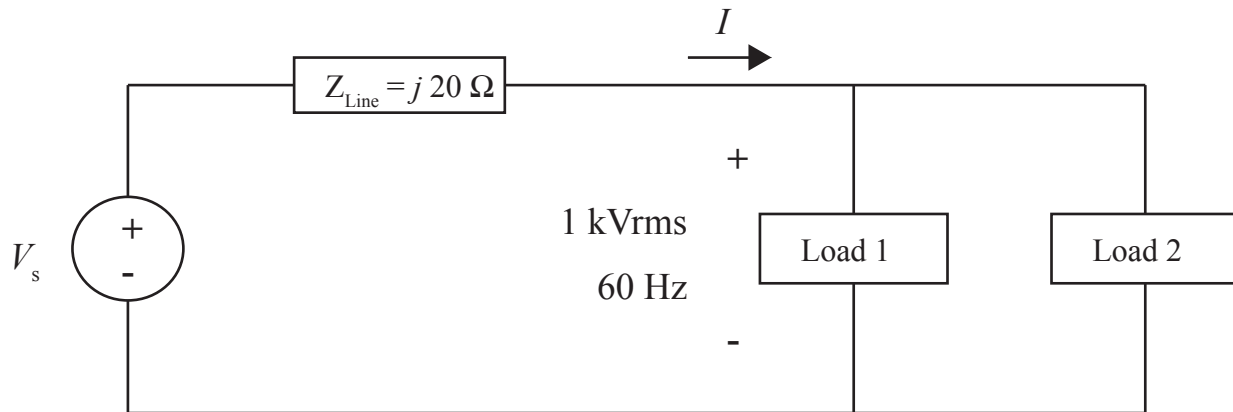


S.P. #11-A

Three loads are connected in parallel to a 1 kVrms line:



Load 1: 17 kVA at 0.7 lagging

Load 2: 9 kW at 0.8 lagging

- What is the power factor of the combined load?
- What is the line current  $I$ ?
- What is the source voltage  $V_s$  needed to maintain 1 kVrms at the loads?
- What capacitance  $C$  in parallel with the loads would raise the PF to 0.9 lagging?