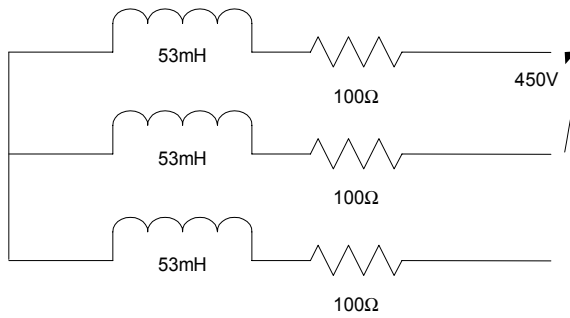


d. Repeat Part c. for a wye-connected load of the same phase impedance.



3. A three-phase 450V system is supplying a delta-connected 100hp load (746W = 1hp) at a power factor of 0.92 lagging. Find:

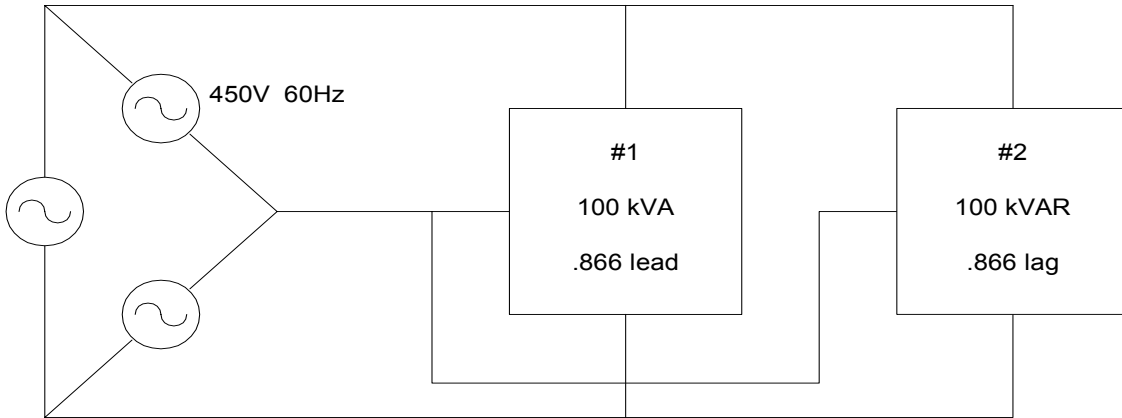
a. The real power

b. The apparent power

c. The line current

d. The phase current

4. Given the following balanced 3 ϕ system, find the apparent power delivered by the generator.



LOAD #1

LOAD #2

TOTAL

2. **How fast should a 6-pole synchronous generator be rotated to provide an output frequency of 60 Hz?**

3. **List the requirements for paralleling a-c generators.**

Section 1.5 – “Motors”

Induction Motors and Synchronous Motors

1. **Draw the torque-speed characteristic curve for an induction motor. Label the horizontal axis with two physical quantities and give two names for the maximum torque the motor can produce. Describe the normal operating region for this motor.**

- 2. Describe the operation of a synchronous motor. Include construction and how the motor is started.**