

Value of voltage source one designated as a machine 1 = 100.0000 V

Value of voltage source two designated as a machine 2 = 86.6000 V

Impedance connected = 5.0000 ohms

Current through the impedance = -10.0000 A

Machine One Power =

$$- 1000. + 268.i$$

Machine Two Power =

$$- 1000. - 267.912i$$

Reactive power required by inductive reactance i.e, impedance = 535.9120 VAR

Machine 1 consumes energy at the rate of 1000.0000 W

Machine 2 generates energy at the rate of 1000.0000 W

Machine 1 supplies reactive power at the rate of 268.0000 VAR

Machine 2 supplies reactive power at the rate of 267.9120 VAR

Reactive power required by inductive reactance i.e, impedance = Sum of reactive power supplied by machine 1 + reactive power supplied by machine 2 = 535.9120 VAR

Real Power consumed by impedance is Zero

The real power generated by machine two is transferred to machine one