LE 325 Assignment #1

Please show all details leading to solutions.

1. Calculate the voltage *V* across the resistance *R* in Fig. 1 and verify the superposition theorem.

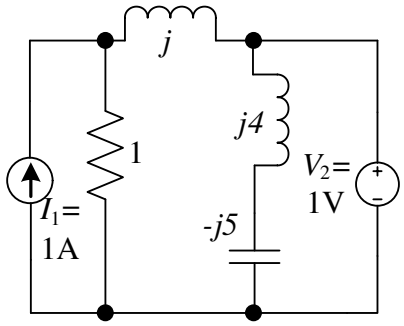

Fig. 1

2. Find the condition such that the network in Fig. 2 is reciprocal.

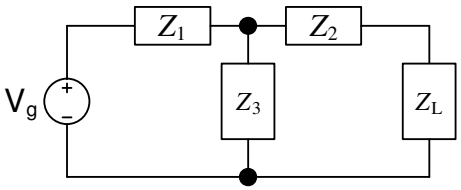

Fig. 2

3. Find the Thevenin's and Norton's equivalent circuits for the circuit shown in Fig. 3.

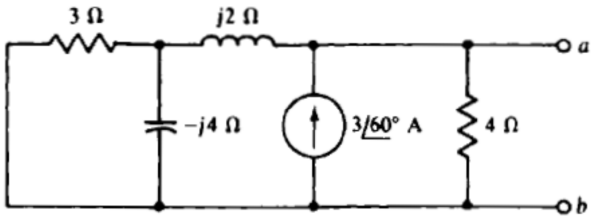

Fig. 3

4. For the circuit shown in Fig. 4, find the load such that the maximum power is transferred and the maximum power.

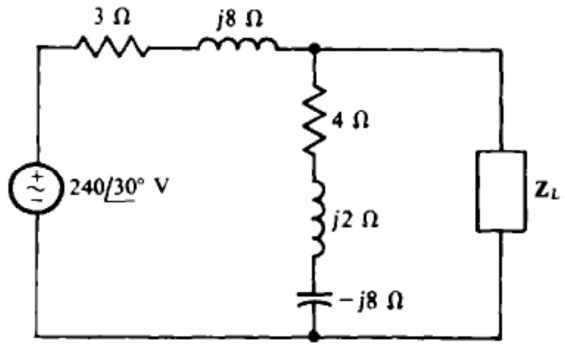

Fig. 4

5. Verify Tellegen's theorem for the pair of networks in Fig. 5

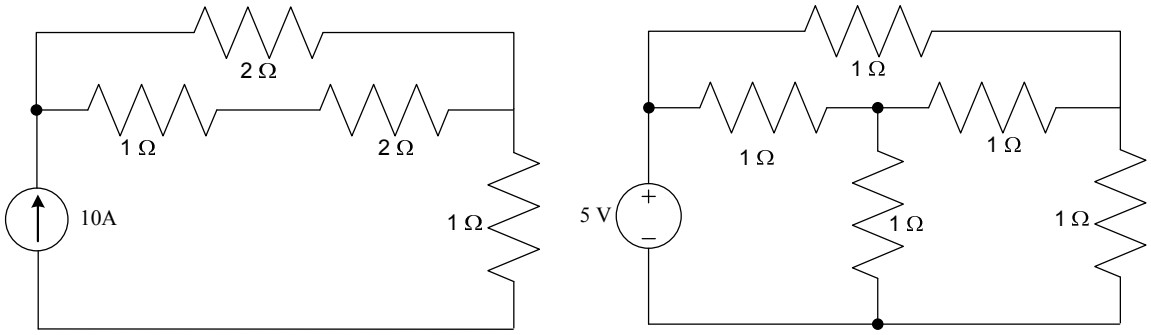

Fig. 5

6. For the circuit shown in Fig. 6, find the current across the resistor R_2. Suppose R_2 is the load, then find the Thevenin equivalent source.

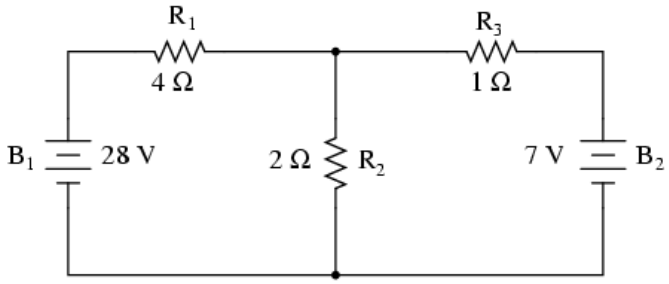

Fig. 6