

NOTE 1: OPEN BOOK, OPEN NOTES.

NOTE 2: SHOW ALL WORK TO RECEIVE FULL CREDIT

1. 15 pts. Determine the power that is absorbed or supplied by the elements in Fig. P1. Check for power conservation law.

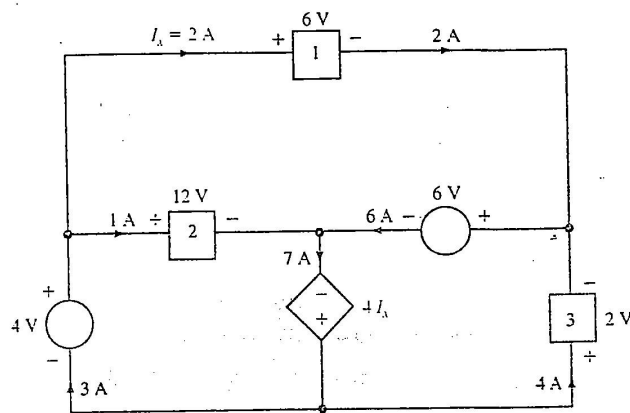


Fig. P1

2. 15 pts. In the network in Fig. P2, if $V_0 = 12V$, find V_s .

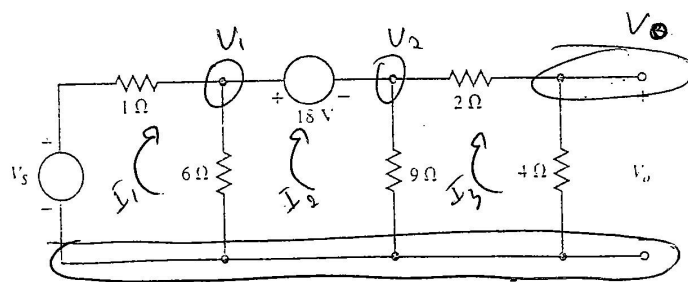


Fig. P2

$V_s = 47V$

$V_s = 11 \times 1 + 36$

$V_s = 47V$

3. 20 pts. Use loop analysis to find V_0 in the network in Fig P3.

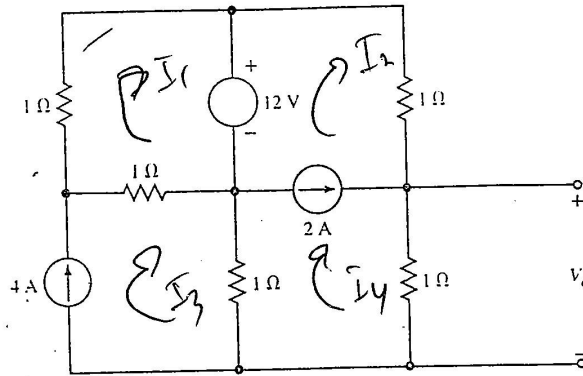


Fig. P3

6V

4. 30 pts. Apply Thevenin's theorem to find V_0 in the circuit in Fig. P4.

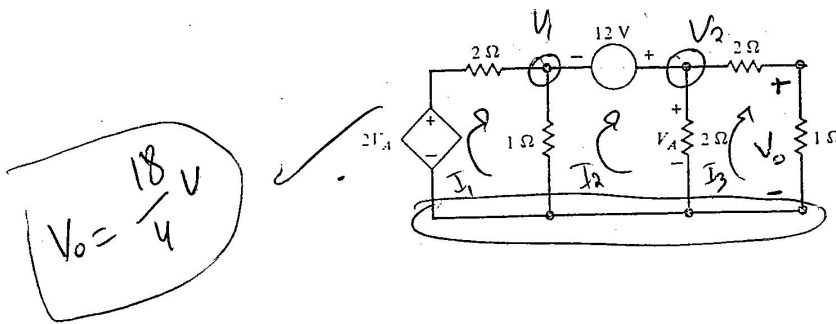


Fig. P4

$V_0 = \frac{18}{4} V$

5. 20 pts. Use Source TRANS. to find V_0 in the Fig. P5.

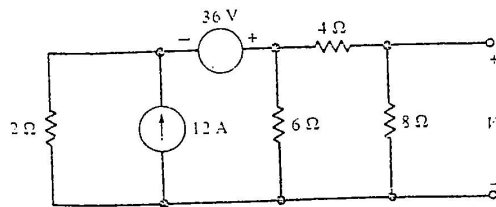


Fig. P5

$V_0 = 26.6 \text{ or } \frac{80}{3}$