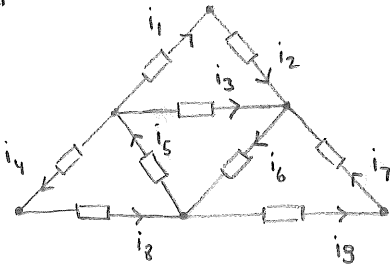
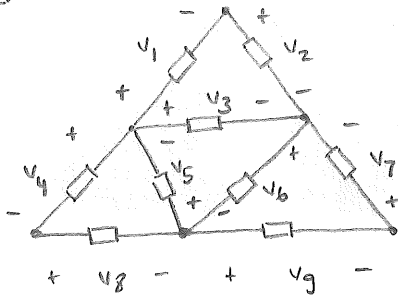
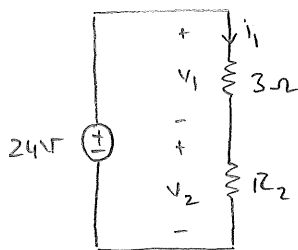
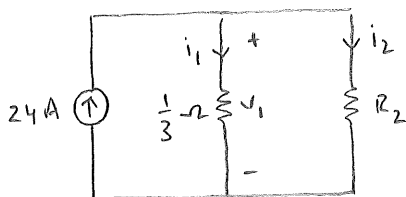
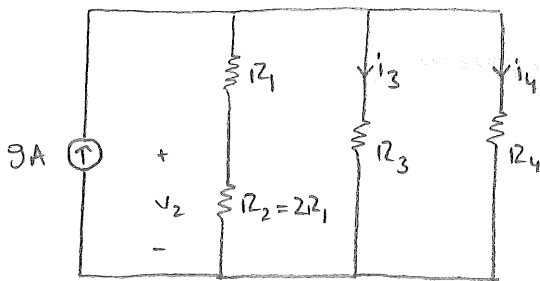


PROBLEM SET 11Given: $i_1 = 1A$, $i_4 = 4A$, $i_5 = 5A$, $i_6 = 6A$ Find i_2, i_3, i_7, i_8, i_9 2Given: $v_1 = 1V$, $v_3 = 3V$, $v_4 = 4V$, $v_8 = 8V$, $v_9 = 9V$ Find v_2, v_5, v_6, v_7 3For the currents and voltages above compute $p = i_1 v_1 + i_2 v_2 + \dots + i_9 v_9$.4Given: $v_2 = 16V$ Find i_1, v_1, R_2 5Given: $i_2 = 16A$ Find v_1, i_1, G_2 $(G_2 = 1/R_2)$

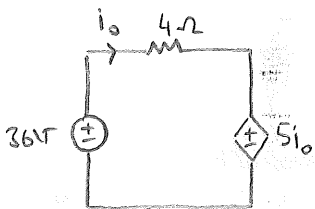
6]



Given: $i_3 = 3A$, $i_4 = 4A$, $v_2 = \frac{2}{3}V$

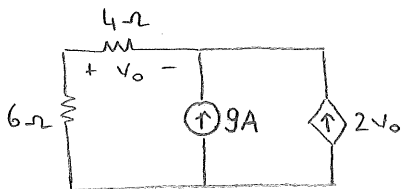
Find R_1, R_3, R_4

7] [Alexander & Sadiku]



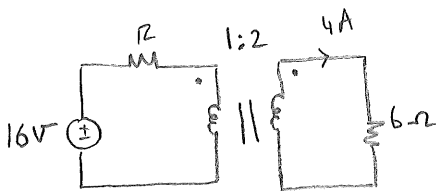
Find i_0 .

8] [A. & S.]



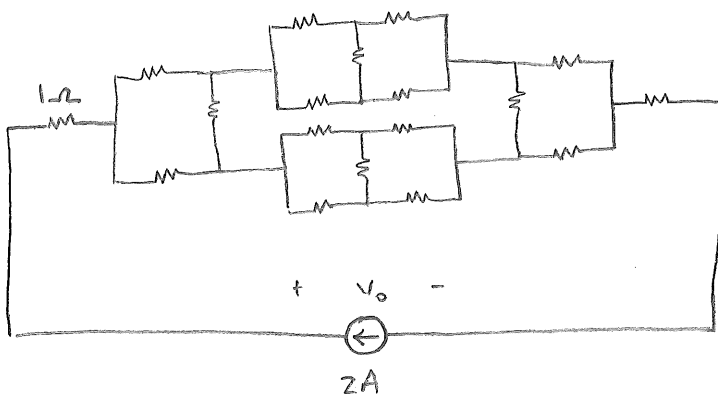
Find v_0 and the power dissipated/delivered by the dependent source.

9]



Find R .

10*



All the resistors are 1Ω .

Using symmetry find v_0 .

KEY

$$\underline{1} \quad i_2 = 1A, \quad i_3 = 0, \quad i_7 = 5A, \quad i_8 = 4A, \quad i_9 = 5A$$

$$\underline{2} \quad v_2 = 2V, \quad v_5 = -12V, \quad v_6 = 9V, \quad v_7 = -18V$$

$$\underline{3} \quad p = 0.$$

$$\underline{4} \quad i_1 = \frac{8}{3}A, \quad v_1 = 8V, \quad R_2 = 6\Omega$$

$$\underline{5} \quad v_1 = \frac{8}{3}V, \quad i_1 = 8A, \quad G_2 = 6S$$

$$\underline{6} \quad R_1 = \frac{1}{6}\Omega, \quad R_3 = \frac{1}{3}\Omega, \quad R_4 = \frac{1}{4}\Omega$$

$$\underline{7} \quad i_o = 4A$$

$$\underline{8} \quad v_o = -4V, \quad P_{dep.} = 80W \text{ (dissipated)}$$

$$\underline{9} \quad R = \frac{1}{2}\Omega$$

$$\underline{10} \quad v_o = 7V$$