

Problem 1-3A: The circuit in Figure 1-3A has 3 elements. Calculate the numerical value for the current, i_A , and the power dissipated in the 3 ohm resistor, give units. [Use Constitutive Laws with nodes, note: 'ground' is zero volts.]

$$1A = \frac{V}{R} = \frac{14}{3} \text{ amps}$$

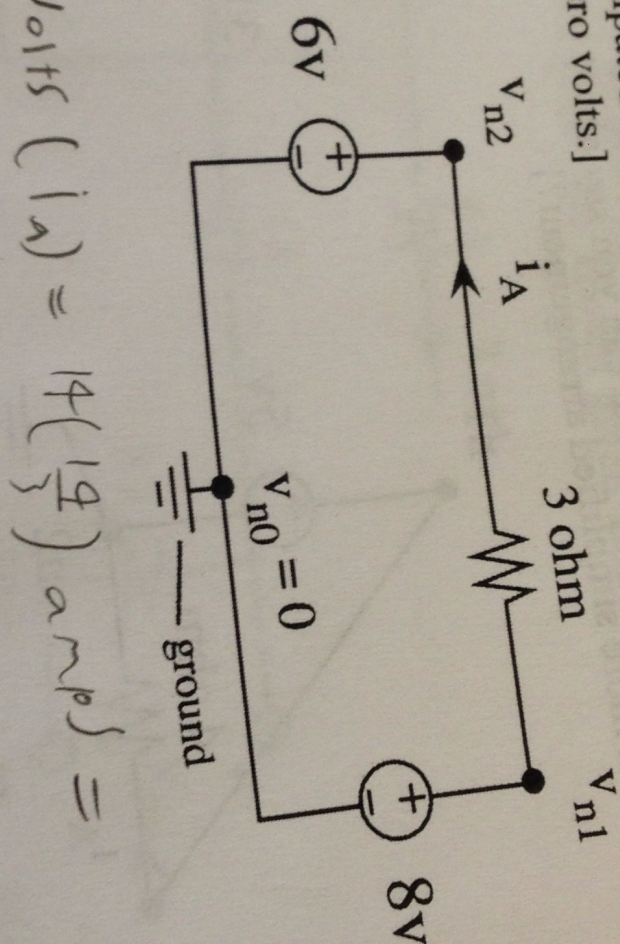
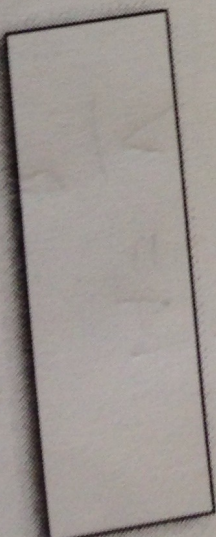
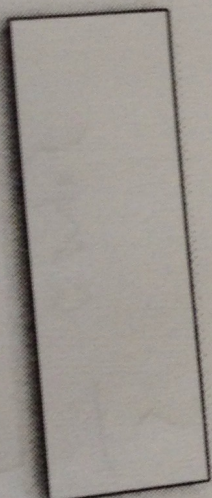


Figure 1-3A

power dissipated = volts (i_A) = $14\left(\frac{14}{3}\right) \text{ amps} =$



Problem 1-3B: The new circuit in Figure 1-3B has 4 elements. Calculate the numerical value for the current i_B and the power dissipated in the 3 ohm resistor, give units. [Use Constitutive Laws with nodes, note: $i_B \neq i_A$ in Problem 1-3A.]