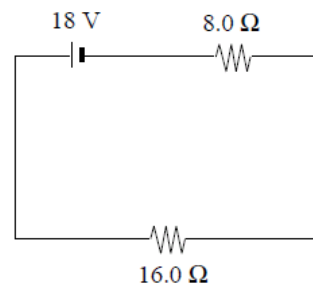
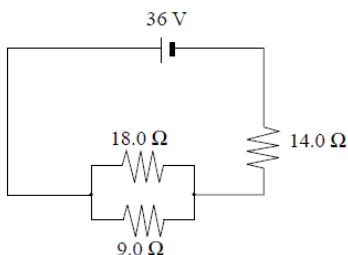


Electric Circuits III: Power

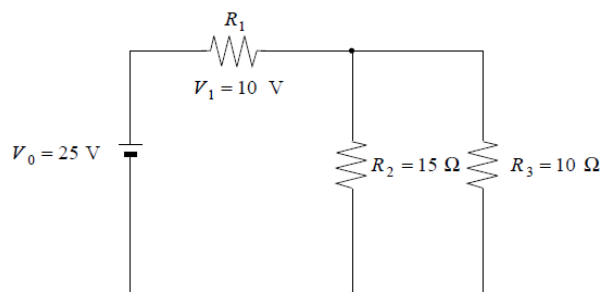
1. Calculate the power dissipated by the $8.0\ \Omega$ resistor in the circuit shown.



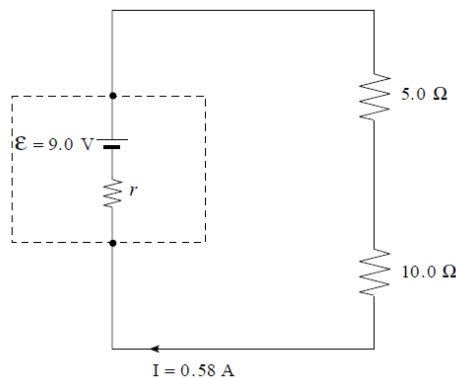
2. What is the power dissipated in the $9.0\ \Omega$ resistor in the following circuit?



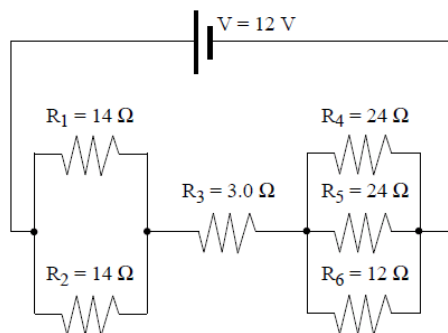
3. In the following circuit, what is the power dissipated by resistor R_1 ?



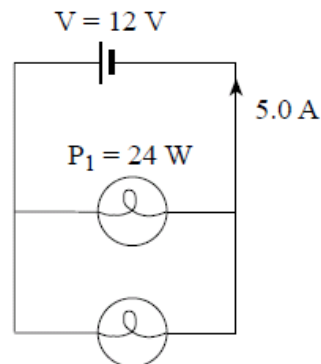
4. In the following circuit, what is the power loss in the battery?



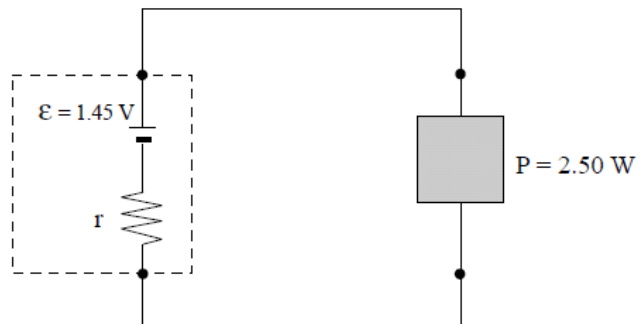
5. What is the power dissipated by the $3.0\ \Omega$ resistor in the circuit below?



6. A 12 V battery supplies a 5.0 A current to two light bulbs as shown below. The power output of one of the bulbs is $P_1 = 24$ W. What is the power output of the other bulb?



7. A 2.50 W device requires 1.20 V to operate properly. A 1.45 V cell, with internal resistance r , is used to power this device. What value of r enables the cell to provide 1.20 V to the device?



8. A 660 W electric heater is designed to operate from a 120 V source. If the source voltage drops to 80.0 V, what will be the power dissipated by the same heater? (Assume the resistance of the heater is constant.)
9. A 75 W bulb is connected across a 120 V source. While the bulb is lighted, what is the effective resistance of the bulb?