

35. The relation  $P = V^2/R$  implies  $P \propto V^2$ . Consequently, the power dissipated in the second case is

$$P = \left( \frac{1.50 \text{ V}}{3.00 \text{ V}} \right)^2 (0.540 \text{ W}) = 0.135 \text{ W} .$$