

40. (a) The monthly cost is $(100\text{ W})(24\text{ h/day})(31\text{ day/month})(6\text{ cents/kW}\cdot\text{h}) = 446\text{ cents} = \4.46 , assuming a 31-day month.
- (b) $R = V^2/P = (120\text{ V})^2/100\text{ W} = 144\ \Omega$.
- (c) $i = P/V = 100\text{ W}/120\text{ V} = 0.833\text{ A}$.