

30. Recalling that a Watt is a Joule-per-second, the heat  $Q$  which is added to the room in 1 h is

$$Q = 4(100 \text{ W})(0.90)(1.00 \text{ h}) \left( \frac{3600 \text{ s}}{1.00 \text{ h}} \right) = 1.30 \times 10^6 \text{ J} .$$