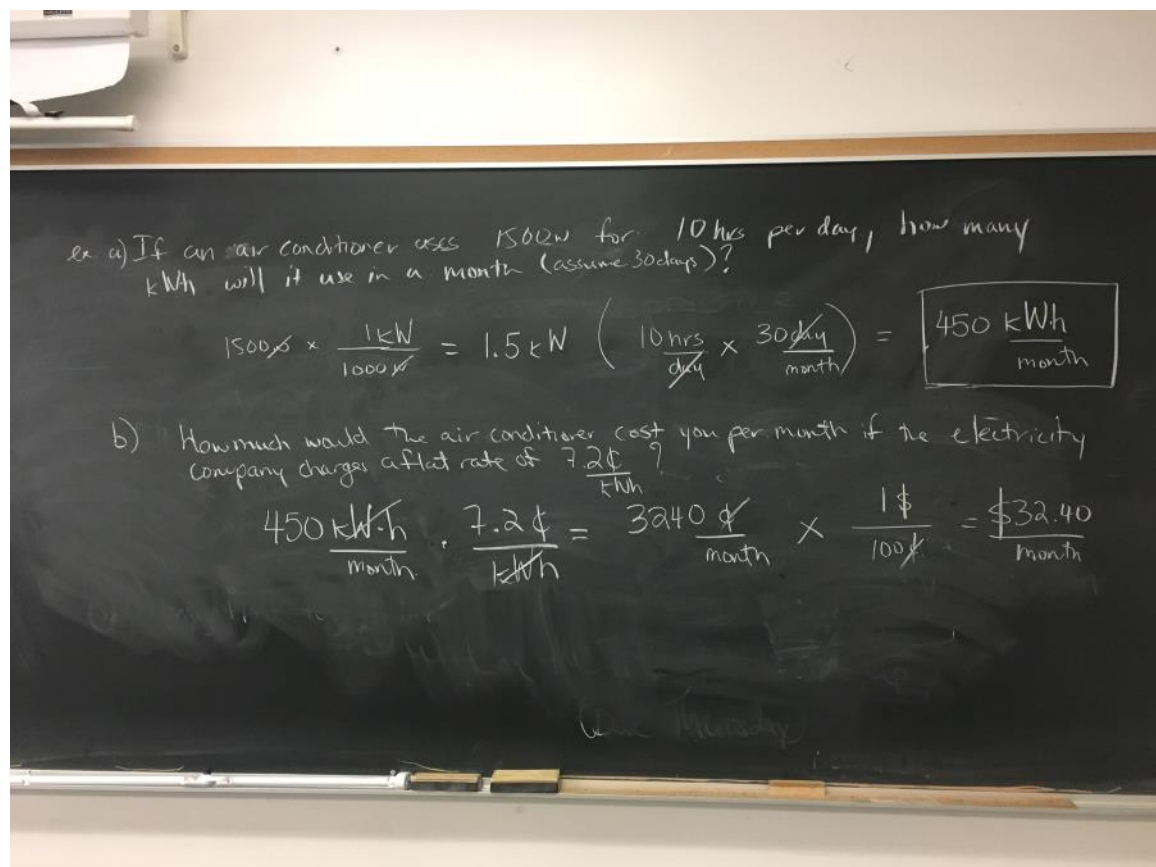
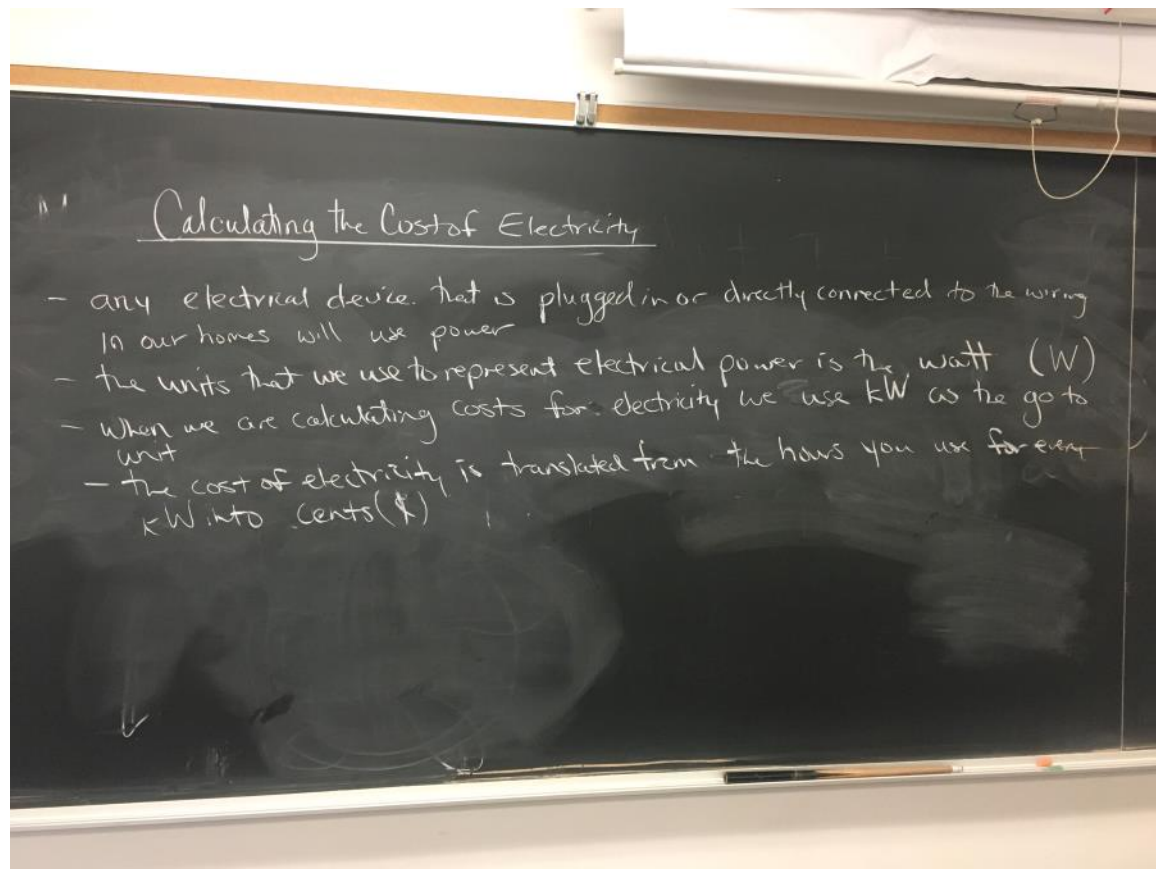


Calculating the Cost of Electricity

December 7, 2017 2:10 PM



A TV draws 60w of power. The family runs the TV for 5hrs per day between 5pm and 10pm. The time of use changes @ 7pm from on peak to off peak. How much money will the TV cost to run for an entire year if the on peak hourly charge is 13.6¢/kWh and the off peak charge is 7.1¢/kWh. Assume 365 days/year

$$\begin{aligned} \text{off peak } \left\{ \begin{aligned} & 0.060\text{kW} \times \left(\frac{3\text{hrs}}{\text{day}} \times \frac{365\text{days}}{\text{yr}} \right) = 65.7 \frac{\text{kWh}}{\text{yr}} \times \frac{7.1\text{¢}}{\text{kWh}} = 466.47 \frac{\text{¢}}{\text{yr}} \\ & 0.060\text{kW} \times \left(\frac{2\text{hrs}}{\text{day}} \times \frac{365\text{days}}{\text{yr}} \right) = 43.8 \frac{\text{kWh}}{\text{yr}} \times \frac{13.6\text{¢}}{\text{kWh}} = 595.68 \frac{\text{¢}}{\text{yr}} \end{aligned} \right. \\ \hline 1062.15 \frac{\text{¢}}{\text{yr}} \times \frac{\$1}{100\text{¢}} = \frac{\$10.62}{\text{yr}} \end{aligned}$$