21. Prove by unit conversions that the Amp Hour rating of a battery is actually the measure of how many electrons are stored in it.

**Units**: Amps = coulombs per second

Amp hour = coulombs per second · hour

Coulomb = \(1.6 \times 10^{19}\) electrons

In numbers

\[
\frac{3600 \text{ seconds}}{\text{hour}} \cdot \frac{1.6 \times 10^{19} \text{ electrons}}{\text{coulomb}} = \frac{\text{coulomb hour}}{\text{second}} = \text{Amp hours}
\]