

Question 32746

Let U_b be the voltage on the battery ($U_b=5.6V$), U be the voltage on the charger ($U=6.8V$), $I=10A$, U_r denote the voltage on the internal resistance.

Total current is calculated as $I=\frac{U}{R+r}$, where r is the internal resistance of the battery. Latter

expression gives $IR+Ir=U$. Resistance of the battery R might be calculated as $R=\frac{U_b}{I}$.

Plugging expression for resistance into $IR+Ir=U$, gives

$$U_b+Ir=U \Rightarrow r=\frac{U-U_b}{I}=\frac{1.2}{10}=0.12\text{Ohm}.$$