

Answer on Question #46000, Physics, Electromagnetism

A battery has emf 13.2V and internal resistance 24m. If the load current is 20.0A, find the terminal voltage of the battery

According to the Ohm law we have :

$$U(R) = E - I \cdot r = 13.2 \text{ V} - 20.0 \text{ A} \cdot 0.024 \text{ Ohm} = 13.2 \text{ V} - 0.48 \text{ V} = 12.72 \text{ V}$$