

Solution:

Given:

$$\varepsilon = 13.2 \text{ V}$$

$$r = 24 \text{ m}\Omega$$

$$I = 20.0 \text{ A}$$

Find:

V-?

Let use Ohm's law for closed with electromotive force

$$\frac{\varepsilon}{R + r} = I$$

The terminal voltage of the battery is

$$U = \varepsilon - Ir = 13.2 - 20 \cdot 0.024 = 12.72 \text{ V}$$

Answer: 12.72 V

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