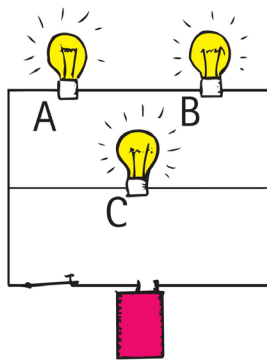


Astronomy Ranking Task: Ohm's Law

Exercise #9

Description: Below is a single circuit with one battery, multiple branches for current to follow, and three bulbs, labeled A – C. The bulbs are all identical and assume the battery has no internal resistance.



A. Ranking instructions: Rank the brightness of the bulbs.

Ranking Order: Greatest 1 _____ 2 _____ 3 _____ Least

Or, each bulb has the same brightness. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

B. Ranking instructions: Rank the amounts of voltage across each bulb.

Ranking Order: Greatest 1 _____ 2 _____ 3 _____ Least

Or, each bulb has the same amount of voltage across it. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

C. Ranking instructions: Rank the currents through the bulbs.

Ranking Order: Greatest 1 _____ 2 _____ 3 _____ Least

Or, each bulb has the same current through it. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

D. Ranking instructions: Rank the resistances of the bulbs.

Ranking Order: Greatest 1 _____ 2 _____ 3 _____ Least

Or, each bulb has the same resistance. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

E. Ranking instructions: Rank the amounts of power dissipated by the bulbs.

Ranking Order: Greatest 1 _____ 2 _____ 3 _____ Least

Or, each bulb dissipates the same amount of power. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:
