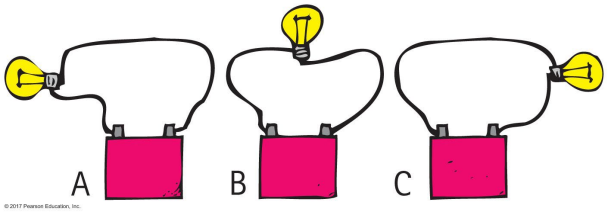
Astronomy Ranking Task:
Ohm's Law

Exercise #5

Description: There are three circuits, labeled A – C, each with one battery, one branch for current to follow, and one bulb. The bulbs are all identical, the batteries are all identical, and assume the batteries have 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: