

Astronomy Ranking Task: Ohm's Law

Exercise #2

Description: There are four circuits, labeled A – D, each with one battery and one branch for current to follow. The batteries' voltages and amounts of current in the branches are as indicated below.

A: 6 V & 0.006 A

C: 120 V & 10 A

B: 120 V & 0.5 A

D: 240 V & 20 A

A. Ranking instructions: Rank the amounts of resistance in each of the circuits' branches.

Ranking Order: Greatest 1 _____ 2 _____ 3 _____ 4 _____ Least

Or, each circuit's branch has the same amount of resistance. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

B. Ranking instructions: Rank the amounts of power dissipated by the resistances in the branches.

Ranking Order: Greatest 1 _____ 2 _____ 3 _____ 4 _____ Least

Or, each branch's resistance dissipates the same amount of power. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:
