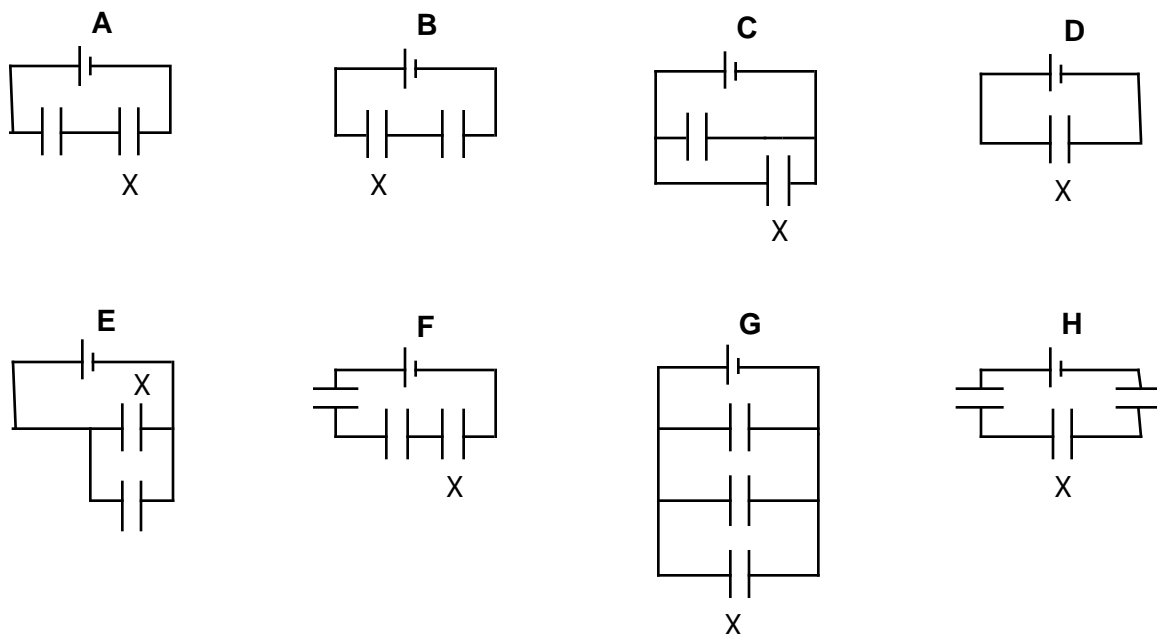


Basic Circuits with Identical Capacitors—Voltage Across a Capacitor¹⁶²

Shown below are eight capacitor circuits. All of the capacitors are identical, and all are fully charged. The batteries are also identical. In each circuit, one capacitor is labeled X.

Rank these circuits in terms of the voltage across capacitor X. That is, put first the circuit in which capacitor X has the largest voltage, and put last the circuit in which capacitor X has the smallest voltage. If two or more circuits result in identical voltages for capacitor X, give these circuits equal ranking.



Largest 1_____ 2_____ 3_____ 4_____ 5_____ 6_____ 7_____ 8_____ Smallest

Or, the capacitors marked X all have the same voltage drop. _____

Please carefully explain your reasoning.

How sure were you of your ranking? (circle one)

Basically Guessed

Sure

Very Sure

1 2 3 4 5 6 7 8 9 10

¹⁶² L. Takahashi, C. Hieggelke, D. Maloney