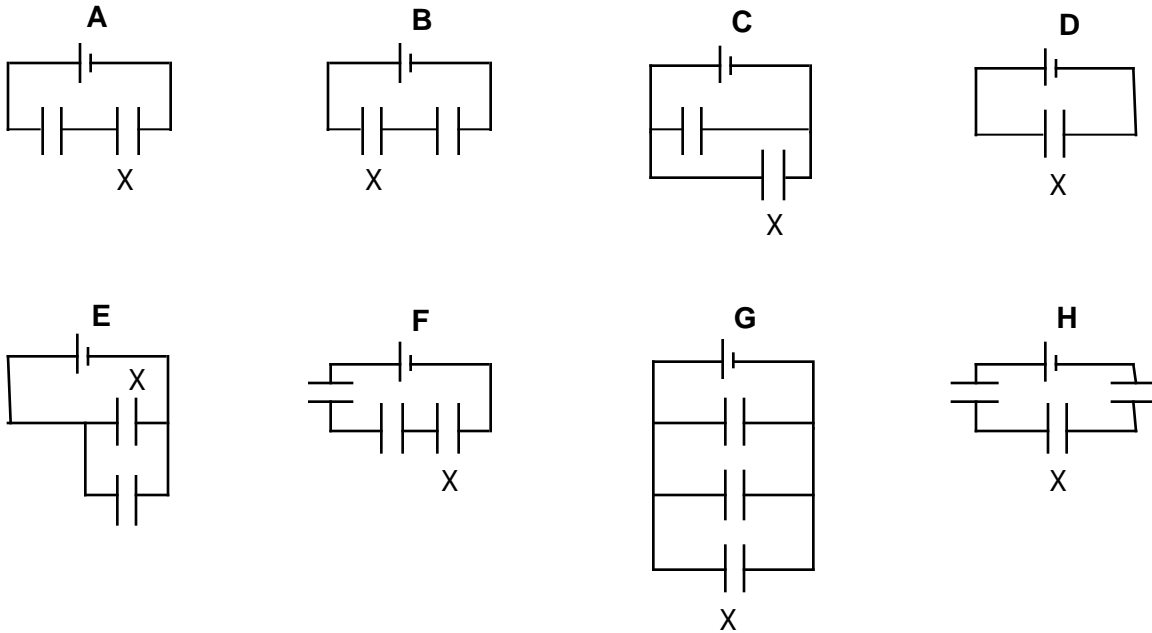


Basic Circuits with Identical Capacitors—Charge on a Capacitor ¹⁵⁹

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 charge on capacitor X. That is, put first the circuit in which capacitor X has the largest charge, and put last the circuit in which capacitor X has the smallest charge. If two or more circuits result in identical charges on capacitor X, give these circuits equal ranking.



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

Or, all of these capacitors have the same charge on them. _____

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

¹⁵⁹ L. Takahashi, D. Maloney, C. Hieggelke