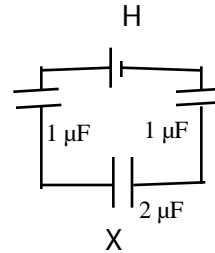
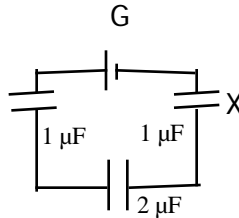
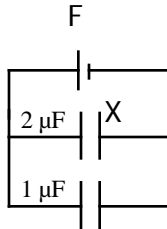
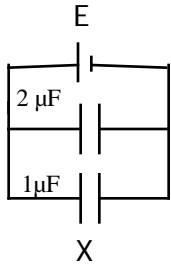
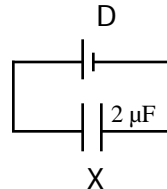
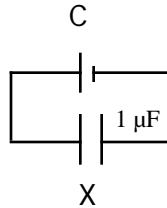
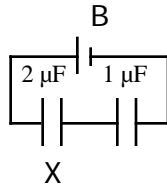
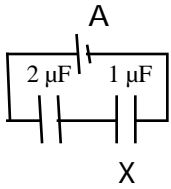


## Simple Capacitor Circuits—Charge on a Capacitor <sup>161</sup>

Shown below are eight capacitor circuits. All of the capacitors are either  $1\ \mu\text{F}$  or  $2\ \mu\text{F}$ , 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 stored in capacitor X. That is, put first the circuit in which capacitor X has the largest charge stored, and put last the circuit in which capacitor X has the smallest charge stored. If two or more circuits result in identical charge stored 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 charge stored. \_\_\_\_\_

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

<sup>161</sup> L. Takahashi, C. Hieggelke