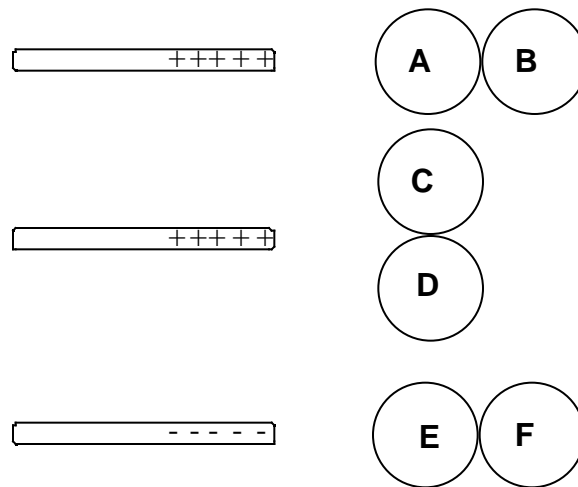


Induced Charges—Near a Charged Rod ¹³⁶

A (positively or negatively) charged rod is brought up to the same distance from each set of metal spheres as shown in separate situations below. The spheres in each pair are initially in contact, but they are then separated while the rod is still in place. Then the rod is removed.

Rank the net charge on each sphere from most positive to most negative after the spheres have been separated and the charged rod removed.



Positive 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ Negative

Or, all spheres have the same charge. _____

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

¹³⁶ B. Emerson, C. Hieggelke, D. Maloney, T. O’Kuma