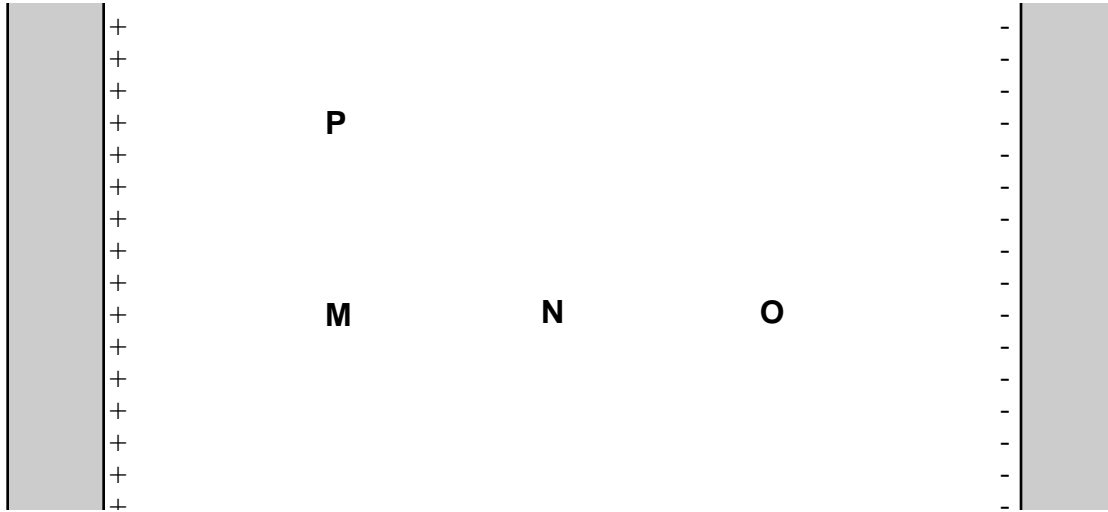


## Uniform Electric Field—Potential Difference<sup>149</sup>

Two parallel plates that have been charged create a uniform electric field of 30 N/C between the plates. Rank the electrical potential differences of all the different combinations listed below between the four points **M** at (2,0) m; **N** at (5, 0)m; **O** at (8,0) m; and **P** at (2, 3) m within this region. (Positive values are larger than negative values.)



Potential difference combinations that are to be ranked—

**A: M to N**  
**F: P to O**

**B: M to O**  
**G: N to M**

**C: N to O**  
**H: M to P**

**D: P to M**

**E: P to N**

Highest      1\_\_\_\_ 2\_\_\_\_ 3\_\_\_\_ 4\_\_\_\_ 5\_\_\_\_ 6\_\_\_\_ 7\_\_\_\_ 8\_\_\_\_ Lowest

Or, all the combinations have the same potential difference. \_\_\_\_\_

Please carefully explain your reasoning.

How sure were you of your ranking? (Circle one of the following.)

Basically Guessed

Sure

Very Sure

1      2      3      4      5      6      7      8      9      10

<sup>149</sup> A. Dickison, C. Ezrailson, M. Plumb, D. Ting