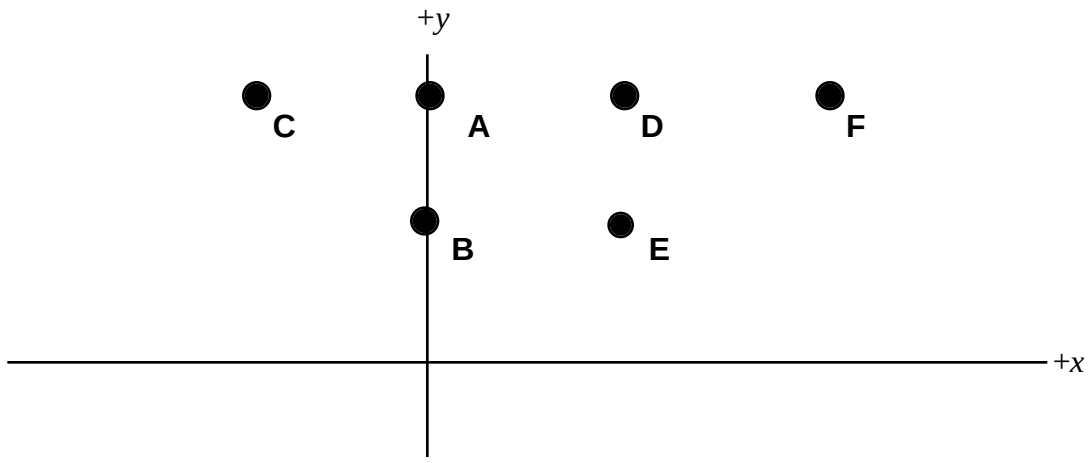
Uniform Electric Field—Potential Energy of a Positive Charge[154]

We have a large region of space that has a uniform electric field in the $+x$ direction ($\Rightarrow$). At the point (0,0) m, the electric field is 30 **i** N/C and the electric potential is 100 volts.

Rank the points specified below on the basis of the electric potential energy of a single charge of +5 C that may be placed at these points.

A: (0, 6) m **B**: (0, 3) m **C**: (-3, 6) m **D**: (3, 6) m **E**: (3,3) m **F**: (6, 6) m



Greatest 1_____ 2_____ 3_____ 4_____ 5_____ 6_____ Least

Or, the +5C charge would have the same electric potential energy at all of these points. _____

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

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