True or False: The electric field, $\mathbf{E}(\mathbf{r})$, in some region of space is zero, thus the electric potential, $V(\mathbf{r})$, in that same region of space is zero.

A. True
B. False

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A. True
B. False

ANNOUNCEMENTS

- Exam 1 is October 5th (next Wednesday)
  - Coverage: Griffiths Ch 1, Ch 2.1-2.4
  - Mathematics (including δ functions), Coulomb and Gauss, Potential and Energy
  - Specific topic/questions on Wednesday
- No homework due next week
  - Homework 5 will be a touch longer

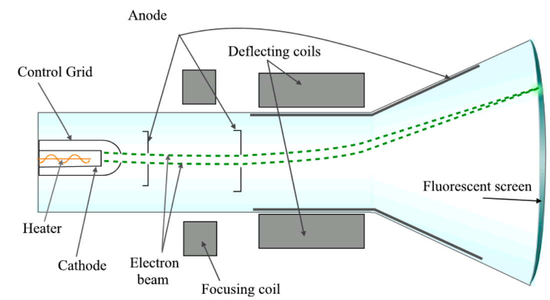
Should we post Homework 5 on Friday or wait to post it until after Exam 1?

A. Post it on Friday.
B. Post it after Exam 1.
C. I don't care either way, but I won't work on it until after Exam 1.

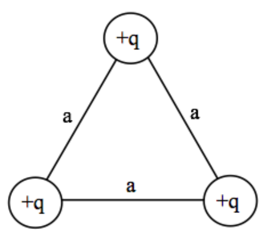
We usually choose $V(r \to \infty) \equiv 0$ when calculating the potential of a point charge to be $V(r) = +kq/r$. How does the potential $V(r)$ change if we choose our reference point to be $V(R) = 0$ where R is close to $+q$.

A. $V(r)$ higher than it was before
B. $V(r)$ is lower than it was before
C. $V(r)$ doesn't change (V is independent of choice of reference)

ELECTROSTATIC POTENTIAL ENERGY

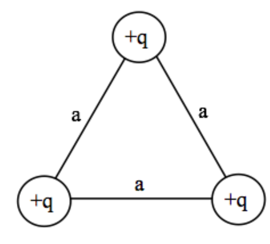


Three identical charges $+q$ sit on an equilateral triangle. What would be the final KE of the top charge if you released it (keeping the other two fixed)?



A. $\frac{1}{4\pi\varepsilon_0}\frac{q^2}{a}$
B. $\frac{1}{4\pi\varepsilon_0}\frac{2q^2}{3a}$
C. $\frac{1}{4\pi\varepsilon_0}\frac{2q^2}{a}$
D. $\frac{1}{4\pi\varepsilon_0}\frac{3q^2}{a}$
E. Other

Three identical charges $+q$ sit on an equilateral triangle. What would be the final KE of the top charge if you released *all three*?



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