|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| The electric field at a point in space is E_vec= (900 \hat{ i }+ 900 \hat{ j } ) \;{\rm N}/{\rm C} .   |  |  | | --- | --- | | Part A |  | | What is the *x*-component of the electric force on a proton at this point?  **Express your answer numerically, in newtons, to three significant figures.**   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | ANSWER: | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | (\vec{F})_{\rm x} = | ***Answer not displayed*** | N |  | | | | | Part B |  | | What is the *y*-component of the electric force on a proton at this point?  **Express your answer numerically, in newtons, to three significant figures.**   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | ANSWER: | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | (\vec{F})_{\rm y} = | ***Answer not displayed*** | N |  | | | |  |  |  | | --- | --- | | Part C |  | | What is the *x*-component of the electric force on an electron at this point?  **Express your answer numerically, in newtons, to three significant figures.**   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | ANSWER: | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | (\vec{F})_{\rm x} = | ***Answer not displayed*** | N |  | | | | | Part D |  | | What is the *y*-component of the electric force on a electron at this point?  **Express your answer numerically, in newtons, to three significant figures.**   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | ANSWER: | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | (\vec{F})_{\rm y} = | ***Answer not displayed*** | N |  | | | |  |  |  | | --- | --- | | Part E |  | | What is the magnitude of the proton's acceleration?  **Express your answer numerically, in meters per second squared, to three significant figures.**   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | ANSWER: | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a_p = | ***Answer not displayed*** | {\rm m/s^2} |  | | | | | Part F |  | | What is the magnitude of the electron's acceleration?  **Express your answer numerically, in meters per second squared, to three significant figures.**   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | ANSWER: | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a_e = | ***Answer not displayed*** | {\rm m/s^2} |  | | | | |