|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 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} |  |

 |

 |

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