Name: _____   Period _____
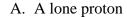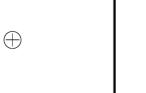
Electrostatics Fields WS 4

1. Draw a diagram of the electric field around each of the arrangements of charges.
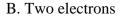A. A lone proton   B. A lone electron

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2. Draw a diagram of the electric field around each of the arrangements of charges.
A. Two protons   B. Two electrons

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3. Draw a diagram of the electric field around each of the arrangements of charges.

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4. A. What is the strength of the electric field 2×10^{-4} m away from a charge of 5×10^{-6} C?
    B. What is the force on an electron placed at that point?

5. How far apart are two charges of magnitude 3.2×10^{-19} C if they exert a force of 5×10^{-16} N on each other?

6. If the force on a proton in an electric field is 0.005 N towards the bottom of the page, then what is the strength and direction of the electric field at that point?

7. What is the magnitude and direction of an electric field 2×10^{-10} m away from an Iron nucleus (26 protons)?

8. If the force on an electron in an electric field is 4×10^{-8} N to the left, then what is the strength and direction of the electric field at that location?

9. What is the magnitude and direction of an electric force on a charge of 1.5×10^{-4} C if it is in an electric field of 2.4×10^{-7} N/C to the right?

10. A. What is the magnitude and direction of the electric field 12×10^{-7} m to the right from a charge of 4×10^{-3} C? B. What is the force on a proton placed at that point?

11. How far apart are two charges of magnitude 5 C if they exert a force of 4.3×10^{-5} N on each other?