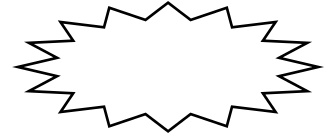
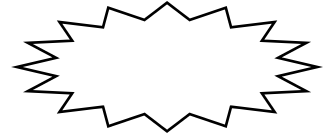


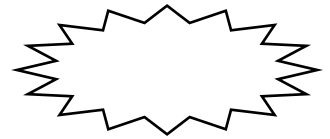
8. What is the magnitude (size) and direction of the E-field 3 nanometers (nm) away from an Oxygen (+8e; mass 16 amu) nucleus? Draw the E-Field.



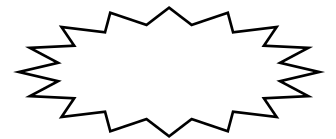
9. What is the magnitude (size) and direction of the force placed on a electron that is 3 nm to the right of the Oxygen nucleus in problem 8 above?



10. How large of a an electric field would be needed to balance the **WEIGHT** of the Oxygen nucleus?



11. The E-field at a distance of 8 nanometers from a certain charge is found to have a magnitude of 5.0×10^{12} N/C. What is the magnitude of the charge which created the E-field?



12. Draw the E-field for each of the following charges:

