General Physics

Review Chapter 16.3

1. How strong would an electric field have to be to produce a force of 1 N on a test charge of 1000 C?
2. An electric field has an intensity of 2 N/C. If it supplies a force of 3 x 10-3 N to a test charge, what is the magnitude of the test charge?
3. What is the size of the force on an electron when the electron is in a uniform electric field that has an intensity of 1000 N/C?
4. In a hydrogen atom, what is the magnitude of the electric field set up the proton at a location of the electric 0.51 x 10-10 meters away?

1. At what distance from the proton would the electric field intensity by 550 N/C?
2. What charge must an object have to create an electric field with an intensity of 1000 N/C at a distance of 0.25 meters?
3. Draw an electric field around a positive object. 7b) Draw an electric field around a second positive object with twice the intensity.
4. Draw the electric field that exists between two positively charged objects.
5. Draw an electric field that exists between a positive and negative object. (figure 10)
6. Determine the strength of the electric field E, when the electric force of 0.2 N acts on a charge of 1 x 10-5 C .
7. Since E = F/q, what happens to the strength of the electric field if the force on the charge increases?
8. The electric field determine in #10, 20,000 N/C, was acting on the 1 x 10-5 charge when it was at 2.12 meters.
9. Determine the electric field strength when the charge is located at a distance of .5 meters.
10. Determine the electric force on the charge in this new location.

a)

b)

1. Two charges are located as shown.
2. Find the net electric field at point B.
3. Find the net electric field at point A
4. Which region A, B, or C will the net

Electric field be zero

1. A negatively charged oil drop weighs 1.9 x 10-15 N (mg). It is suspended in an electric field created by a Millikan Apparatus. If the electric field is 6 x 103 N/C.
2. What is the charge on the oil drop?
3. How man excess electron does it have?
4. A positively charged particle is suspended in a Millikan apparatus. If the drop weighs 6.4 x 10-13N (mg) and the electric field is 4 x 106 N/C
5. What is the direction of the electric field
6. What is the magnitude of the charge of the particle.
7. How many electrons are missing

16a. Find the net electric field at A.

16b. Find the net electric field at B.

16c. Which area could the electric field be “0”.