Electric Potential Notes

I. Electric Potential - _____ needed or _____ acquired when a positive charge is _____.

II. Potential Difference - (A.K.A. - _____) potential energy difference between _____

A) Potential Difference, energy, and work

As a charge moves through an electric field it gains potential or kinetic energy

1) *** _____

W = _____done against field or energy acquired working with field (**Joules**)

q : amount of _____moving through field

(_____)

_____

Ex) It takes 6.0 Joules of work to move 2.0 Coulombs of charge between 2 points in an electric field. What is the potential energy difference (voltage) between these 2 points?

2) Second form of potential difference equation

V = _____ (not on reference)

W = _____ done against field or _____working with field

(**Electronvolts Ev**) Electronvolt – small energy unit = _____

q : amount of _____ moving through field
(#elementary charges)

V: _____ (**volts**)

ex. It takes 10. eV to move 2.0 elementary charges from one point to another in an electric field. Find the potential difference between these points.

Ex) +2.0 elementary charges acquire 16 joules of energy when they move between 2 points in an electric field. What is the potential difference (voltage) between these two points in the field?

B) Potential Difference and Electric field

Millikan Experiment 1911

Millikan studied _____ on _____ in a uniform electric field.

He suspended the _____ in the electric fields and was able to discover:

1) _____ charge = _____