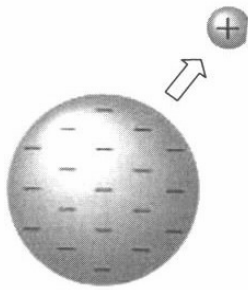I.
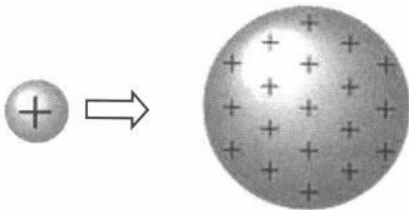
Work must be done _____ a positive charge to move it away from a negative sphere.

The electric PE of the charge will _____.

When the charge is released, it will move closer to the negative sphere. Its electric PE will _____ and work can be done _____ the charge.

II.   _____ is required to push the small + charge against the electric field around the + sphere.
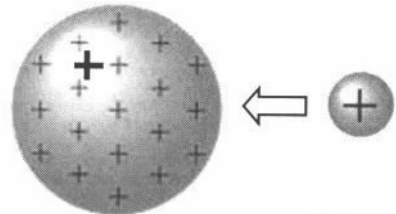
Since work is done (on, by) the small charge, its PE (inc, dec).

The closer it gets, the (more, less) it is repelled by the field and the (more, less) work is required.

III.
Once the little charge is placed on the sphere, the charge on the sphere (inc, dec), and the field around it becomes (weaker, stronger).

Moving the next + charge toward the sphere will take even (more, less) work and give the small charge even (more, less) PE.

- Potential difference is

- Unit is

- Potential difference is also called _____ ( ).

Equations:

$$V = \frac{\quad}{\quad}$$ or $$V = \frac{\quad}{\quad}$$

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Example Problem-
    A balloon receives 5000 v when it is rubbed on your head and acquires a charge
    of 0.5 µC. What is the total PE of the electrons on the balloon's surface?

Problem Set #1   *(on back or own paper)*

Electric Discharge:
arc -

    Facts about Lightning:
    • Charges are

    • Ground under

    • V =

corona –

    Lightning Rods –
        •

        •