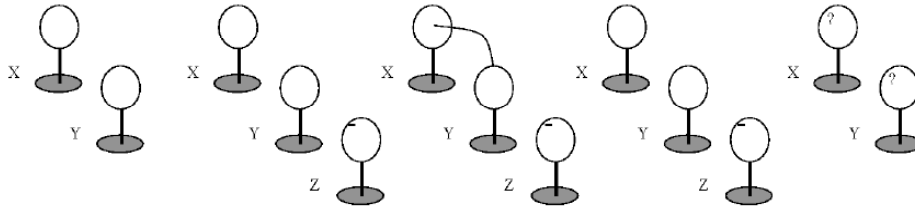


Prelab E-1 Part I

Name:

Section:

- You are provided with a strand of wire, a charged rod, a grounding source, and an uncharged metal sphere supported on an insulating stand. Explain with sufficient detail how to charge the metal sphere so that the sphere carries
 - the same kind of charge as on the rod
 - the opposite kind of charge as on the rod
- The figure below shows two uncharged metal spheres, X and Y, supported on insulating stands. A third sphere, Z, carrying a negative charge, is brought near the first two. A conducting wire is then run between X and Y. The wire is then removed, and sphere Z is finally removed.



When this is all done it is found that

- spheres X and Y are uncharged.
 - spheres X and Y are both positively charged.
 - spheres X and Y are both negatively charged.
 - sphere X is + and sphere Y is -.
 - sphere X is - and sphere Y is +.
- Will the charge in the electroscope assembly redistribute itself if a charged object is brought close to (but does not touch) the conducting knob? If so, will the net charge on the knob be of the same or opposite sign? What will be the sign of the charge on the foil leaves be?