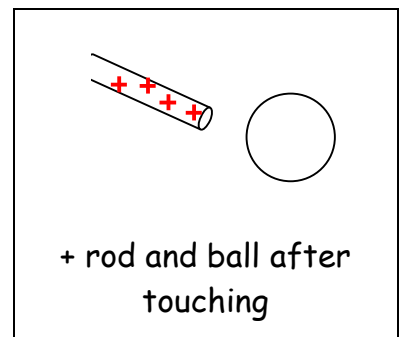
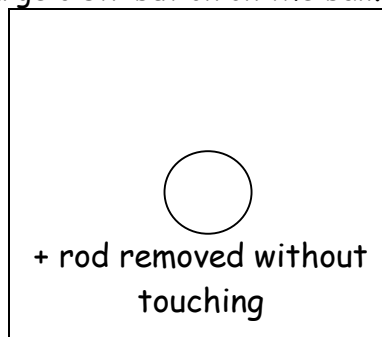
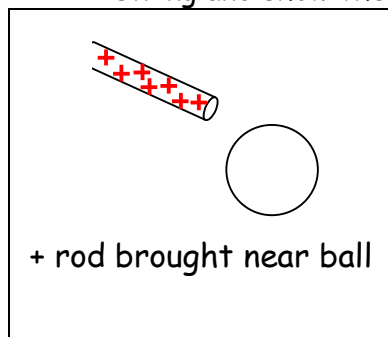


1. When it is rubbed with nylon, a PVC rod gains electrons and is (+, -) charged. The rod has been electrified by _____. Even though the rod is being touched on one end, the rod keeps its charge. Why?

2. When the rod touches the metal sphere electrons travel to the (rod, sphere) because electrons (**repel**, **attract**) each other and spread out as far as possible. In the first diagram, draw an arrow showing the direction the electrons move. When the rod is removed, the sphere is left with a (+, -) charge. The process is (**temporary**, **permanent**) and is called _____. In the second diagram, draw the net charge on the sphere.

3. The following cases involve a pith ball and charging rod. In each case, draw the string and show the charge distribution on the ball.



4. Transferring a static charge without touching is called _____. The side of the object closest to the charging rod receives a charge that is (**the same as**, **opposite that of**) the charging rod. The process is (**temporary**, **permanent**).

5. Draw the leaves on the electroscopes below, and use 4 positive and 4 negative charges to show the charge distribution in each case.

