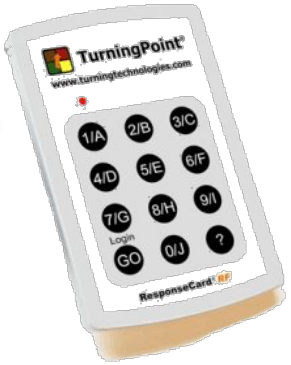
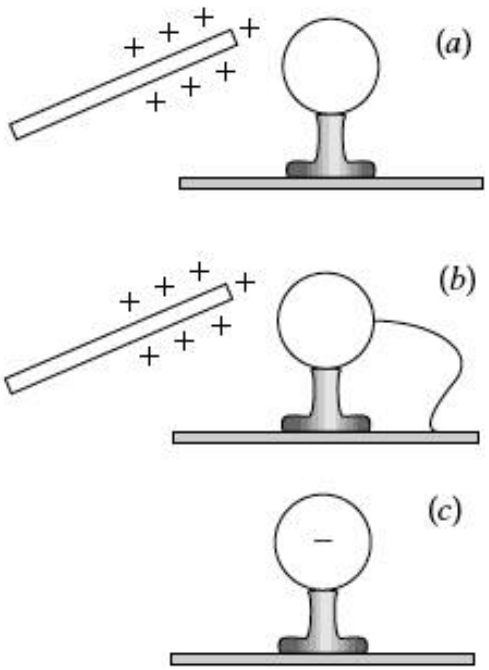
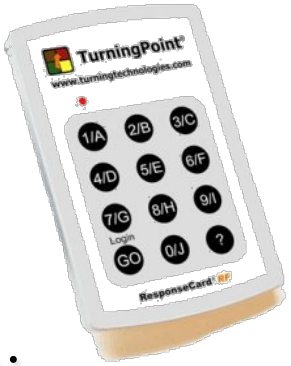
What's wrong with the two-balloon scenario?



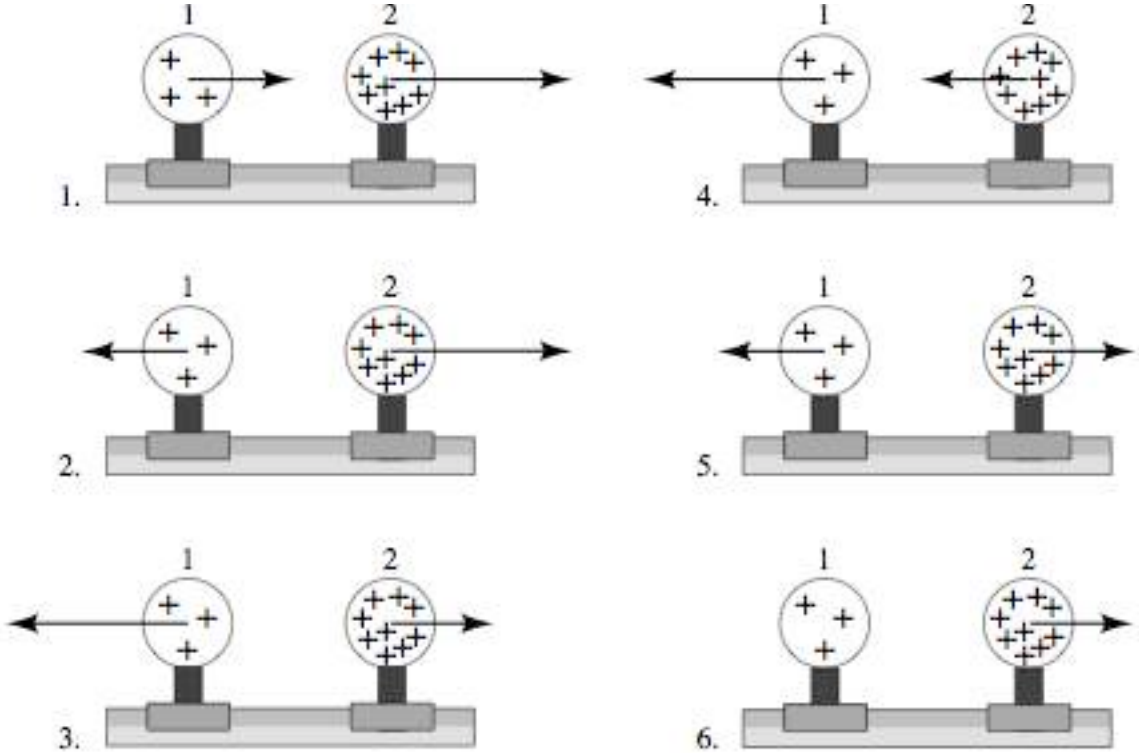
A + charged object is placed near a conductor attached to an insulating pedestal (a). After the opposite side of the conductor is grounded for a short time (b), the conductor becomes negatively charged (c). Based on this information, we can conclude that within the conductor



1. both + and - charges move freely
2. only - charges move freely
3. only + charges move freely
4. We can't really conclude anything



Two uniformly charged spheres are firmly fastened to and electrically insulated from frictionless pucks on an air table. The charge on sphere 2 is three times the charge on sphere 1. Which force diagram correctly shows the magnitude and direction of the electrostatic forces



7. none of the above