14.P.50

1) Place B and C in contact, with C closer to A

2) A will cause polarization of CB combination

3) Now separate C and B

14.P.51

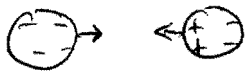
(a)

Place A and B in contact, bring charged pen close to A. Negative charge on pen will polarize AB combination, with + charge on side toward pen and − charge on opposite side. Then separate A and B.

(b)

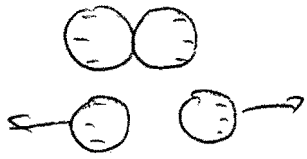
Start out as in part (a). Touch finger or other grounding device to far side of B, allowing negative charges to be removed from B.
Remove the pen.
The positive charge on A will then distribute itself over A and B. Separate A and B.

14.P.13 (a) When the charged sphere is brought close to the uncharged sphere, the uncharged sphere becomes polarized



The positive side of the uncharged sphere is then attracted to the negatively charged sphere.

When the two spheres come into contact, the negative charge spreads out over the combined outer surface of the two spheres, and the two negatively charged spheres repel each other



(b), (c) The spheres polarize the molecules in the plastic, which will show positive charged ends toward the ends of the plastic. These positive charges will attract the negatively charged spheres. Molecules farther away from the spheres are less polarized.