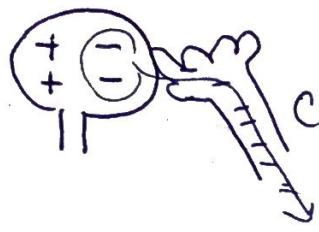
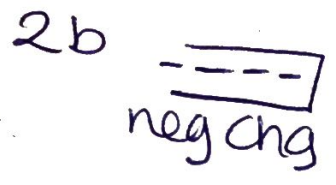
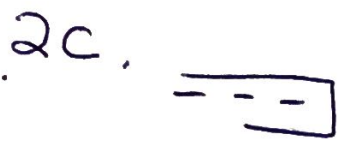


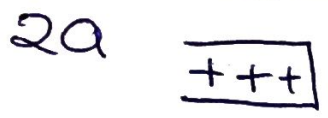
metal sphere polarizes (rearranges charge)



charges move to neutral hand b/c charges move from high concentration to low concentration (grounding)



induction - 3 objects



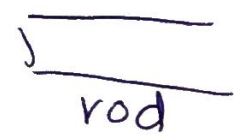
Polarizes



grounds



induction



a) To get this you must realize that the fur lost  $+5\mu\text{C}$  electrons, so it has  $+5\mu\text{C}$  protons.



$$\frac{1e^-}{-1.6 \times 10^{-19} \text{C}} = \frac{?e}{5 \times 10^{-6} \text{C}}$$

$$x(-1.6 \times 10^{-19}) = -5 \times 10^{-6} \text{C}$$

$$x = \frac{-5 \times 10^{-6} \text{C}}{-1.6 \times 10^{-19} \text{C}} = 3.125 \times 10^{13} e$$

so it has  $+3.125 \times 10^{13}$  protons

### 3. Polarization



Attracts

plastic Bag



attracts