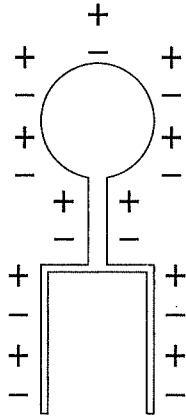
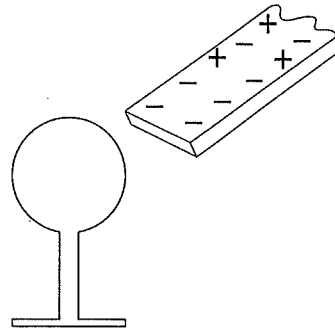


Charging an Electroscope by Induction with a Negatively Charged Rod

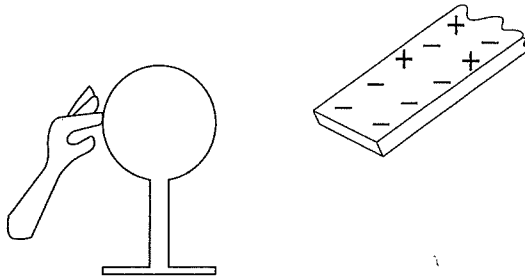
In (a), the metal leaves of the electroscope are neutral and hang straight down. For each subsequent picture, show the effect of the charged rod on the electroscope by drawing the change in electron distribution and the position of the leaves.



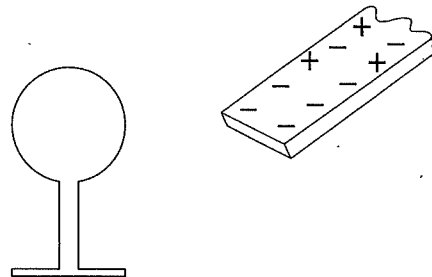
(a) Neutral electroscope



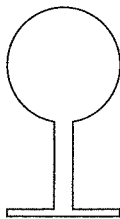
(b) Approach by negative rod



(c) The electroscope is grounded.



(d) The ground is removed, but the charged rod is not.

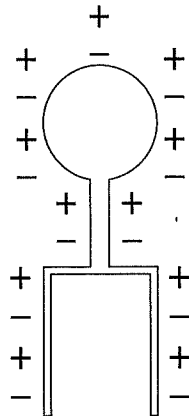


An object charged by induction receives a charge opposite to that of the charged rod.

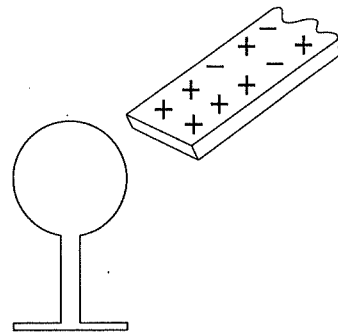
(e) The charged rod is removed.

Charging an Electroscope by Induction with a Positively Charged Rod

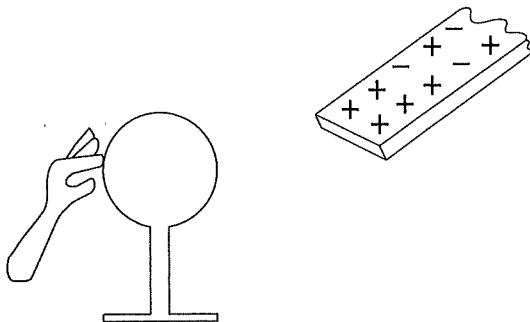
In (a), the metal leaves of the electroscope are neutral and hang straight down. For each subsequent picture, show the effect of the charged rod on the electroscope by drawing the change in electron distribution and the position of the leaves.



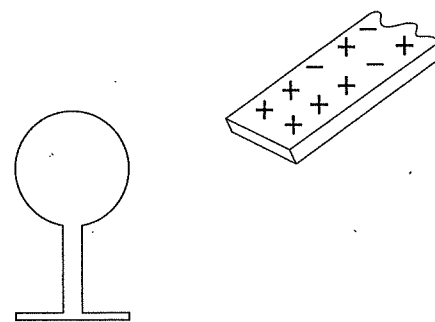
(a) Neutral electroscope



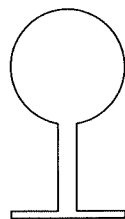
(b) Approach by positive rod



(c) The electroscope is grounded.



(d) The ground is removed, but the charged rod is not.



(e) The charged rod is removed.

An object charged by induction receives a charge opposite to that of the charged rod.