

Electric Fields

An electric field exists in a region if a charged body placed there experiences a force because of its charge. The stronger the force experienced, the stronger the field.

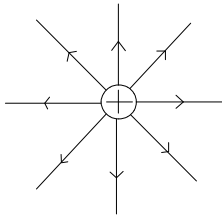
We represent electric field using field lines, where the direction of the line is the direction of force a positive charge would feel. The density (closeness) of the lines represents how strong the field is.

Electric field lines:

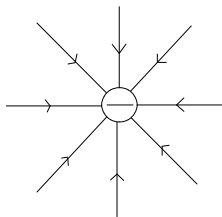
- never cross
- shouldn't have any gaps
- touch conductors at right angles

Examples:

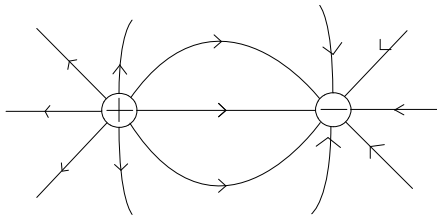
1. Positive point charge



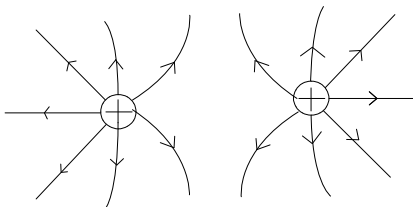
2. Negative point charge



3. Opposite point charges



4. Like point charges



5. Oppositely charged plates

