

DRAWING FIELD LINES

When drawing field lines of a given charge distribution respect the following basic rules:

- Field lines start at a positive charge (source) and end at a negative charge (drain). If there is no source or drain, they start or end at infinity, respectively.
- The number of field lines leaving a charge is proportional to the magnitude of the charge.

ATTENTION: Since field lines are usually drawn in a plane, this rule cannot be applied in a simple way.

- Field lines cannot intersect.
- Field lines are always perpendicular to conducting surfaces.
- There is no electric field inside conductors (Faraday cage).
- The field between two oppositely charged parallel conducting plates is homogeneous, i.e. the field lines are parallel and equally spaced.