

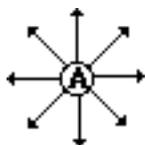
Electric Field Lines

Read from **Lesson 4** of the **Static Electricity** chapter at **The Physics Classroom**:

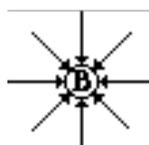
<http://www.physicsclassroom.com/Class/estatics/u814c.html>
<http://www.physicsclassroom.com/Class/estatics/u814d.html>

MOP Connection: Static Electricity: sublevel 12

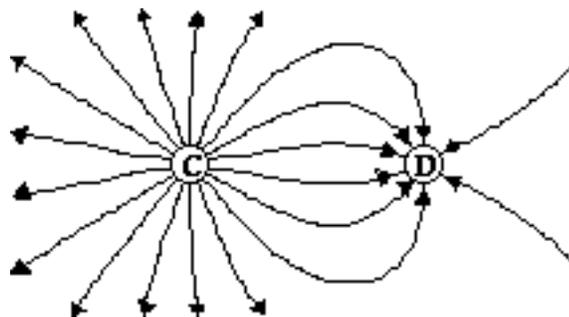
- Electric field lines begin on _____ (+, -) charges or at infinity and terminate on _____ (-, +) charges or infinity. The number of lines that emanate from a charge or approach a charge depends upon _____. At locations where a line meets the surface of a charge, the lines are drawn in a _____ (tangent, radial) direction. The strength of the electric field is _____ (smallest, greatest) wherever the lines are closest together.
- Use your understanding of electric field lines to identify the charges on the objects in the following configurations.



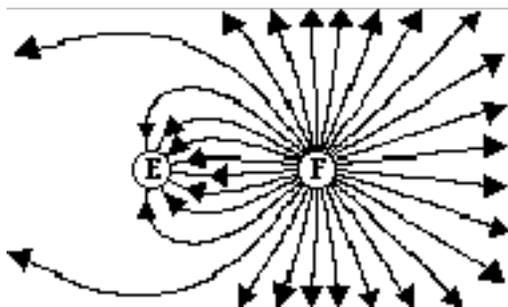
A: + or -



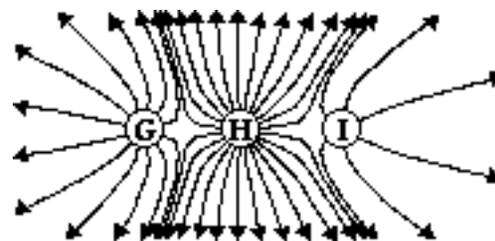
B: + or -



C: + or - D: + or -

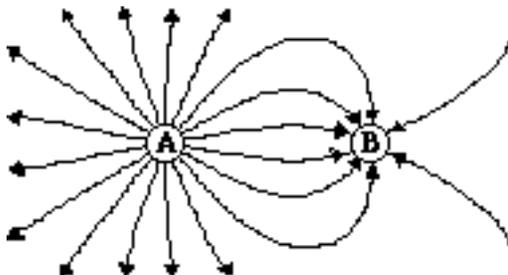


E: + or - F: + or -

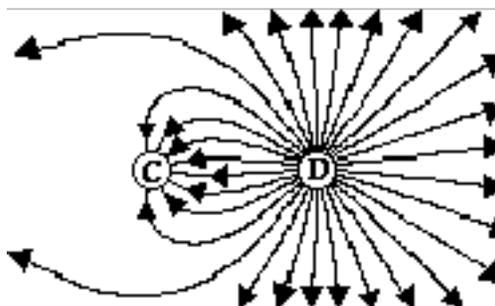


G: + or - H: + or - I: + or -

- Observe the electric field lines below for various configurations. Rank the objects according to which has the greatest magnitude of electric charge, beginning with the smallest charge.

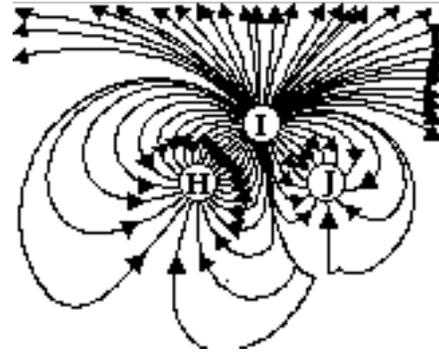
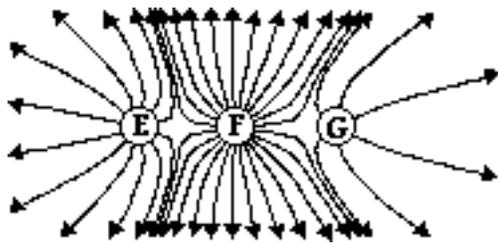


Ranking: _____ < _____



Ranking: _____ < _____

Static Electricity



Ranking: _____ < _____ < _____ Ranking: _____ < _____ < _____

4. Draw the electric field lines for the following configurations of charges. Place arrows upon your electric field lines.
