

Answer on Question #64108, Physics / Electromagnetism

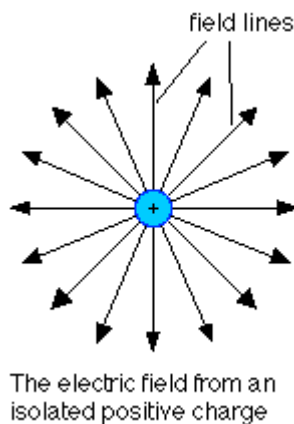
Suppose that electric field in some region is found to have a constant direction but to be decreasing in strength in that direction what do you conclude about the charge in the region.

Solution:

The electric field from a positive charge points away from the charge; the electric field from a negative charge points toward the charge. Like the electric force, the electric field E is a vector. If the electric field at a particular point is known, the force a charge q experiences when it is placed at that point is given by :

$$F = qE$$

If q is positive, the force is in the same direction as the field.



An electric field can be visualized on paper by drawing lines of force, which give an indication of both the size and the strength of the field. Lines of force are also called field lines. Field lines start on positive charges and end on negative charges, and the direction of the field line at a point tells you what direction the force experienced by a charge will be if the charge is placed at that point. If the charge is positive, it will experience a force in the same direction as the field.

Answer: The charge is **positive**.

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