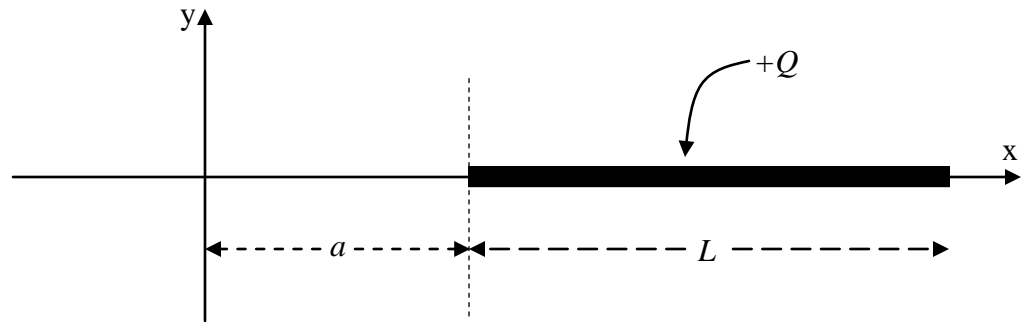


Physics 2135

Special Homework Assignment #4

An insulating rod of length L has a total charge of $+Q$ uniformly spread along its length. The rod lies along the x -axis with its left end located at $x = a$.



(a) Find the electric potential at the origin.

(b) A charge of $-q$ is now moved from infinity to the origin. How much work was done by the external agent which moved the charge $-q$?

(c) What is the direction of the electric force on the charge $-q$ when it is at the origin?