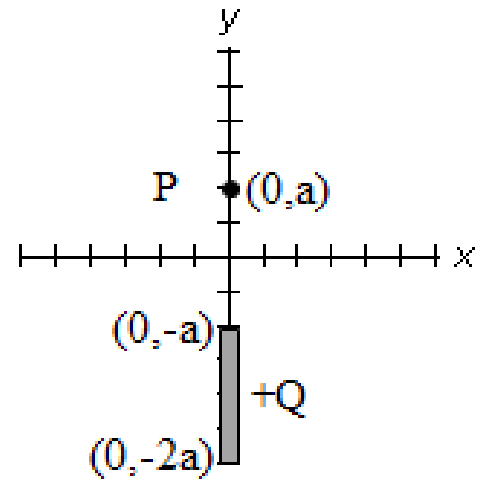


Unit 1 Quiz: Electrostatics

1. A charged comb often attracts small bits of dry paper that then fly away when they touch the comb. Explain why that occurs.

2. A charged rod of length a is located on the cartesian plane as shown. The rod has a charge of $+Q$. Find an expression for the electric field at point P.



3. A particle of charge $-Q$ and mass M is projected with an initial velocity v_0 into the uniform field between the plates shown. The electron enters the field at a point midway between the plates. If the electron hits the upper plate exactly at the upper end as shown, determine an expression for the electric field in terms of Q , M , x , and v_0 .

