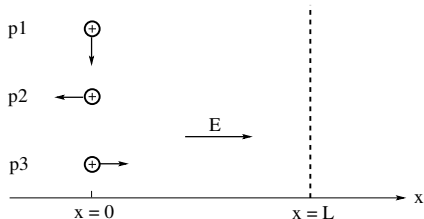


## Electric Potential and Potential Energy: Application (6)



Three protons are projected from  $x = 0$  with equal initial speed  $v_0$  in different directions. They all experience the force of a uniform horizontal electric field  $\vec{E}$ . Ultimately, they all hit the vertical screen at  $x = L$ . Ignore gravity.



- (a) Which proton travels the longest time?
- (b) Which proton travels the longest path?
- (c) Which particle has the highest speed when it hits the screen?

Two of the questions are easy, one is hard.