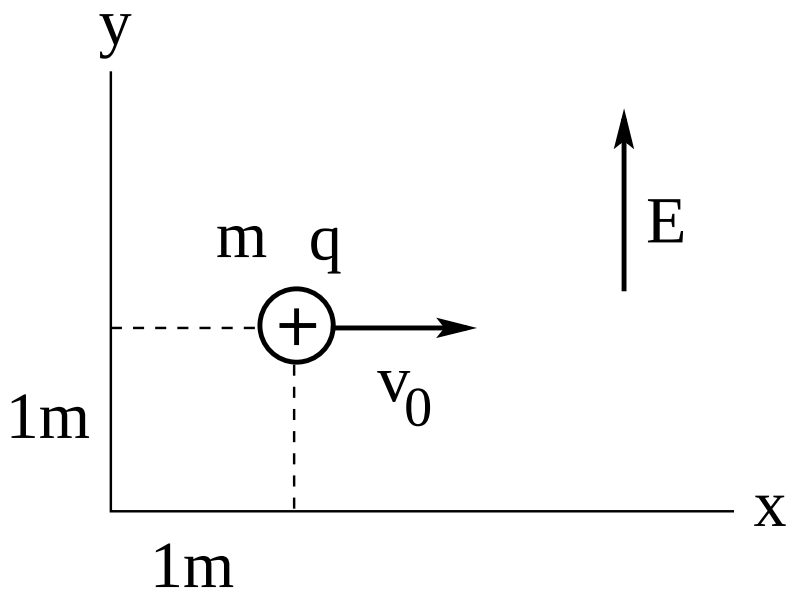
Particle Projected Perpendicular to Uniform Electric Field

A charged particle $(m = 3\text{kg},\ q = 1\mu\text{C})$ is launched at $t_0 = 0$ with initial speed $v_0 = 2\text{m/s}$ in an electric field of magnitude $E = 6 \times 10^6 \text{N/C}$ as shown.



(a) Find the position of the particle at $t_1 = 3\text{s}$.

(b) By what angle does the velocity vector turn between $t_0 = 0$ and $t_1 = 3\text{s}$?