Particles Accelerated by Uniform Electric Field

A uniform electric field $E = 0.75 \times 10^3$N/C exists in the box.

(a) A charged particle of mass $m_1 = 1.9 \times 10^{-9}$kg is released from rest at $x = 3$cm, $y = 0$. It exits the box at $x = 3$cm, $y = 6$cm after a time $t_1 = 5.7 \times 10^{-5}$s. Find the charge q_1.

(b) A second charged particle of mass $m_2 = 2.7 \times 10^{-14}$kg is projected from position $x = 0$, $y = 3$cm with initial speed $v_0 = 3.2 \times 10^4$m/s. It exits the box at $x = 3.9$cm, $y = 6$cm. Find the charge q_2.