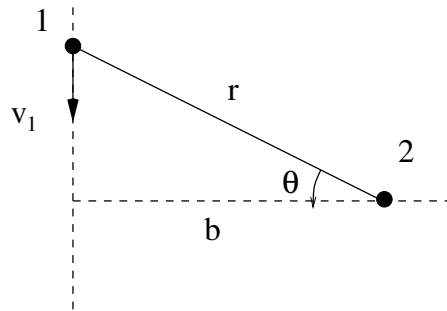## [mex10] Particle experiencing soft Coulomb kick

A particle with charge Q_1 and mass m_1 moves at very high velocity v_1 along a (nearly) straight line that passes at a distance b from a particle with charge Q_2 and mass m_2, which is initially at rest. The assumptions are that the two particles interact via a Coulomb central force and that the second particle does not change its position significantly during the encounter.
(a) Find the direction in which the second particle will move after the encounter.
(b) Find the energy ΔE transferrred from the first to the second particle during the encounter.

Solution: