Name: ....

1. A 2.5 eV proton rotates in a circle of radius 3.34 cm under the influence of a uniform magnetic field. Calculate the magnitude of the magnetic field.

2. Two long straight wires, having equal but opposite currents, are parallel and 8 cm apart. If the magnitude of the magnetic field at a point halfway between them is 300 μT, calculate the current.

Constants: permeability constant μ_0=4π×10⁻⁷ T.m/A, proton's mass m_p=1.67×10⁻²⁷ kg, electronic charge e=1.6×10⁻¹⁹ C