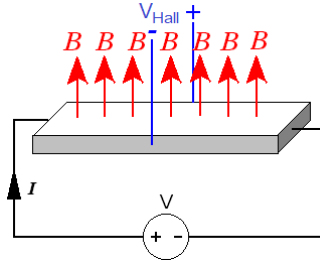# Physics II

Hall Effect

Problem 1.- An experiment is done with a sample of doped silicon (with electrons as carriers of electricity) as shown in the schematic figure below. Calculate the Hall voltage if the drift velocity of the electrons is v=0.55 m/s, the magnetic field is 0.95T and the width of the sample is 2.0 cm.

Problem 2.- An experiment done with a sample of doped silicon reveals a Hall voltage as shown in the schematic figure below. With this information determine if the carriers are positive or negative and give a short rationale of your reasoning.