Homework Assignment 3 due Wednesday January 29

/1/ Exercise 10.1.

/2/ Exercise 10.2.

/3/ Exercise 10.3.

/4/ Exercise 10.6.

/5/ Exercise 10.8.

/6/ Exercise 10.9.

/7/ FLIP COIL - used to measure Earth's magnetic field
A circular coil of copper wire is placed in a uniform magnetic field, and the ends are connected to a galvanometer. The field direction is perpendicular to the plane of the coil. Now, the coil of wire is flipped over, i.e., rotated by 180 degrees about a diameter of the circle. The total charge passing through the galvanometer is measured to be Q. Then what is the strength of the magnetic field? Define any quantities that you use in the answer.