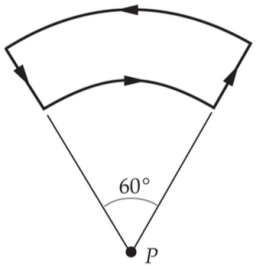
Practice Problem Set 7

1. Wolfson 26.60 (Please comment on your result.)

2. The closed loop shown in the figure carries a current I in the counter-clockwise direction. The radius of the inner arc is R_1 and that of the outer arc is R_2. Find the magnetic field at point P.



3. Consider a simple classical model for a hydrogen atom. Suppose an electron (of charge $-e$ and mass m_e) orbits the nucleus (of charge $+e$) and is confined purely by electrostatic forces to a circular orbit of radius R. What is the magnetic dipole moment of the electron?