1. Griffiths Problem 5.1 [6pts]

Hints: This is cyclotron motion. The bending radius $\rho$ can be found with $\rho, \rho-d$, and $a$ as three legs of a triangle [Draw it.]
2. Griffiths Problem 5.2 [4pts]
3. Griffiths Problem 5.4 [7pts]

Hints: The loop segments can be treated as individual wires and you can then sum the forces.
4. Griffiths Problem 5.8 [10pts]

Hints: Each side of the loop is just a single line segment, which we solved in class. Feel free to pick-up from the middle of that result. For the n-sided polygon, recall that the sum over all angles of a polygon is $2 \pi$, so the angle subtended by one side is $2 \pi / n$. For part c, note that the small-angle approximation will apply.
5. Griffiths Problem 5.16 (4 $4^{\text {th }}$ Edition; called 5.15 in the $3^{\text {rd }}$ Edition) [8pts]

Hints: Use superposition and the solenoid result from class.

