

Due: Wednesday Oct 22

Essay 1 (20 points)

- a) Draw the magnetic field lines near a bar magnet. Describe two experiments you did to “see” the magnetic field lines. Explain how we assigned a direction to the field line.
- b) Draw the magnetic field lines of a bar magnet when like poles face each other and when unlike poles face each other. Explain why a compass placed at different points (to the left of the first magnet, in between the poles, in between the magnets, to the right of the second magnet) behaves the way it does. (4 cases to explain for each scenario).

Essay 2 (10 points)

We normally associate magnetic fields with magnets. What are the other sources of magnetic fields. How would you explain with the help of pictures and words the shape of magnetic fields created by this “other source”?

Essay 3, 10 points

In class, we compared made measurements using our sensations of “hot” and “cold”, as measured through the sense of touch. We also used a thermometer to take exact measurements. Are these the same things? How are they related? Give examples to support what you say from the experiment we did in class, and give at least 2 examples from “every day life” (i.e. from observations from your life outside the classroom) that support your conclusions as well.