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Class: _____

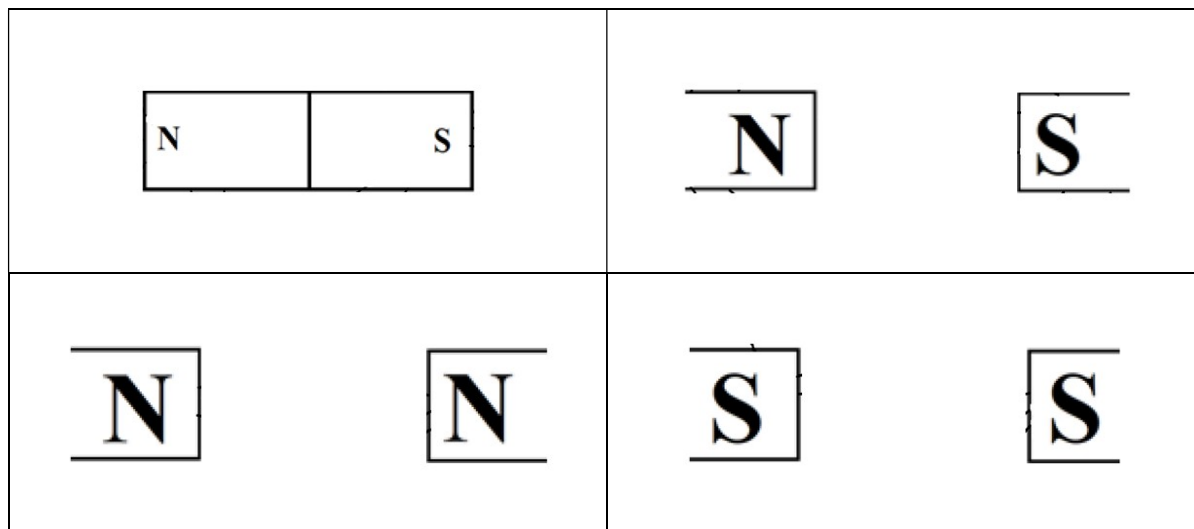
Due Date: _____

46 – Magnets, Magnetic Field Lines, and Solenoids

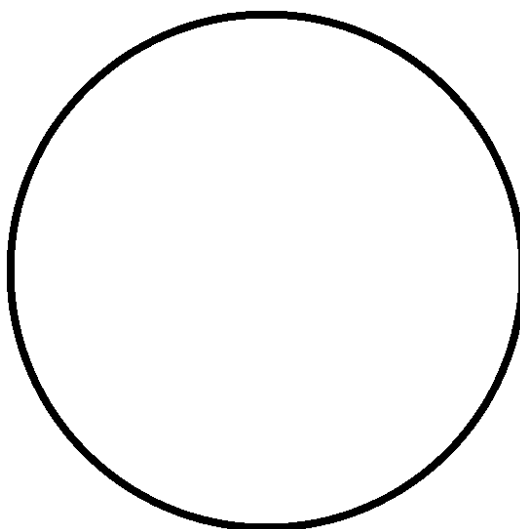
Answer the following questions. The solutions to this worksheet can be found on the YouTube channel Go Physics Go.

1. C: List some differences between the electric force and the magnetic force.
2. C: What are two situations in which magnetic fields are observed?
3. C: List some metals which have magnetic properties.
4. C: Define *hard magnet*. Define *soft magnet*.
5. C: How can you demagnetize a magnet?
6. C: Give some rules for drawing magnetic field lines.

7. C: Use a pencil and ruler! For each figure draw six magnetic field lines with arrows.



8. C: Draw and label the Earth's magnetic north pole (MN), magnetic south pole (MS), geographic north pole (GN), and geographic south pole (GS). Draw four magnetic field lines with arrows.

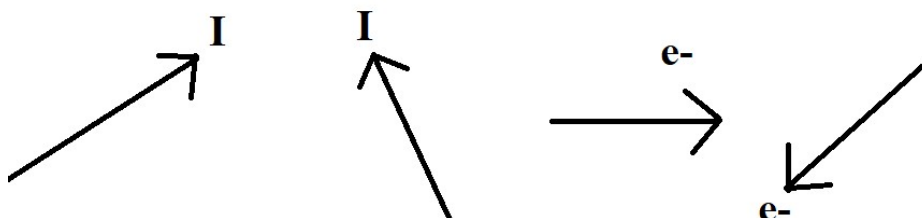


9. C: What are some differences between magnetic field lines and electric field lines?

10.C: What is a *magnetic monopole*? Where in the universe can we find a *magnetic monopole*?

11.C: Draw the symbols for an axis going into the page and out of the page.

12.C: **Use a pencil!** Draw magnetic field lines for each current carrying wire.



13.C: **Use a pencil!** Describe and draw a *solenoid*. Use the right hand rule to draw magnetic field lines and the poles.

14.C: State three ways we can we increase the magnetic field inside a solenoid.

15.C: Draw magnetic field lines in a circular current carrying loop.

