Name key

Date _____ Pd All

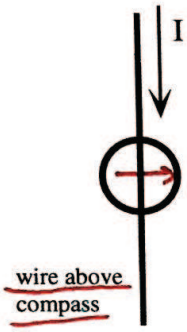
# Magnetism: Worksheet 1

## Part 1

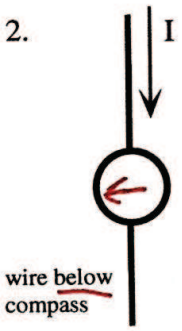
For questions 1-4, draw in the needle of the compass (in large empty circle) showing the deflection that the needle will experience. North is at the top of the page. If there is no deflection write none.

Note: The symbol ⊙ represents a wire coming out of the paper and ⊗ represents a wire going into the paper.

1.



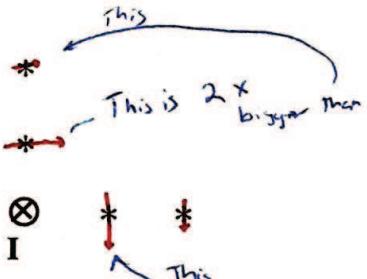

2.



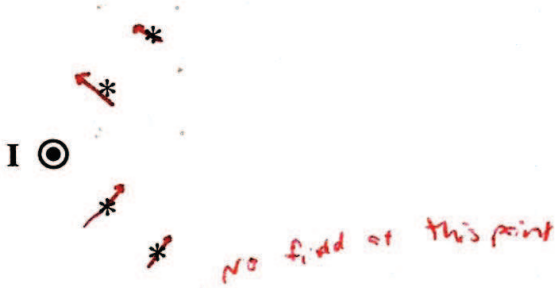

3.


For questions 4 – 7, sketch vectors to represent the strength and direction of the magnetic field at the designated places due to the current in the wire(s).

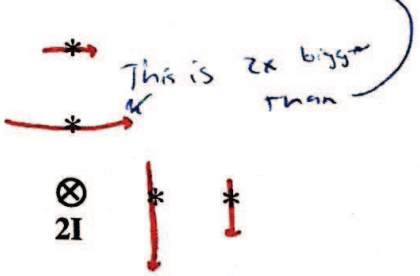
4.



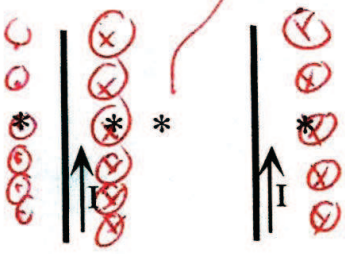

5.




6.




7.

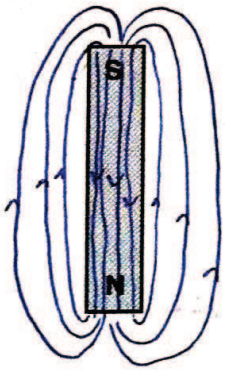



The result of this would be that the wires will attract.

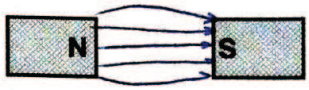
## Part 2

For each diagram representing a magnet or current-carrying conductor below, draw in the associated magnetic field lines. If the lines are in the plane of the paper, represent them with arrows in the appropriate direction, as per the angry Physics Gnomes! If the field lines are coming out of the plane of the paper, represent them with ⊙; if they are going into the paper, represent them with crosses ⊗.

8.



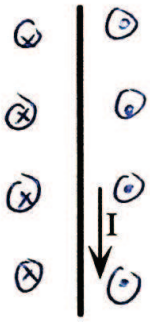

9.



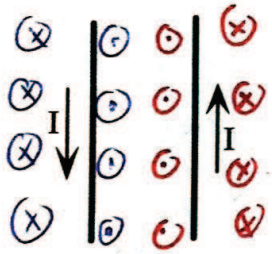

10.

current carrying wire perpendicular out of page

11.




12.




The result of this would be The wires repel each other!

13.