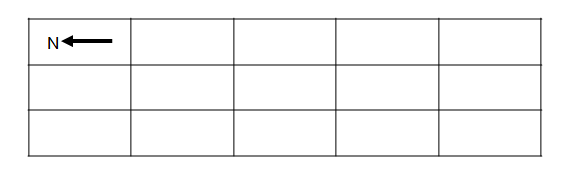
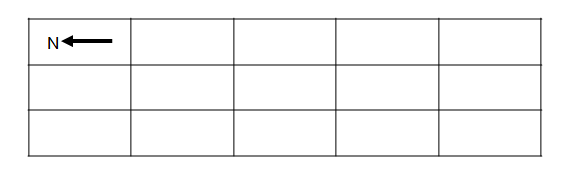
**Domain Theory**

1. Complete the following diagram showing how the domains might appear for an   
   *un-magnetized* object.
2. Complete the following diagram showing how the domains might appear for an   
   *magnetized* object.

1. Explain if all metals can be magnetized. (Hint: Research *ferro-magnetic* materials.)
2. Explain what would happen if you break a bar magnet in half.

1. Explain if magnetism in a material is permanent or if and how it can be changed.

**Law of Magnetic Poles**

1. Use the Law of Magnetic Poles to answer the following:
   1. South and South ( Attract / Repel / Neutral )
   2. South and North ( Attract / Repel / Neutral )
   3. North and South ( Attract / Repel / Neutral )
   4. North and North ( Attract / Repel / Neutral )

1. Explain if a magnet will attract *any* un-magnetized metallic object or just *certain types* of un-magnetized metallic objects.

**Magnetic Fields**

1. Draw the magnetic field around the following bar magnet. Make sure to show the direction and density (intensity) of the magnetic field lines.



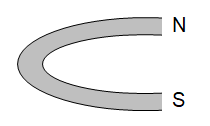
1. Draw the magnetic field lines showing the attraction between the following magnetic poles.



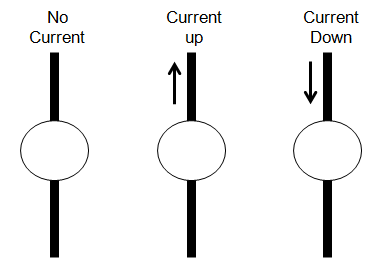
1. Draw the magnetic field lines showing the repulsion between the following pairs of magnetic poles.

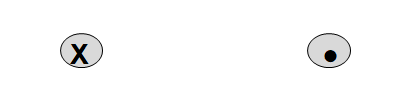


1. Draw the magnetic field around the poles of the following horseshoe magnet. Make sure to show the direction and density (intensity) of the magnetic field lines.



**Oersted’s Principle**

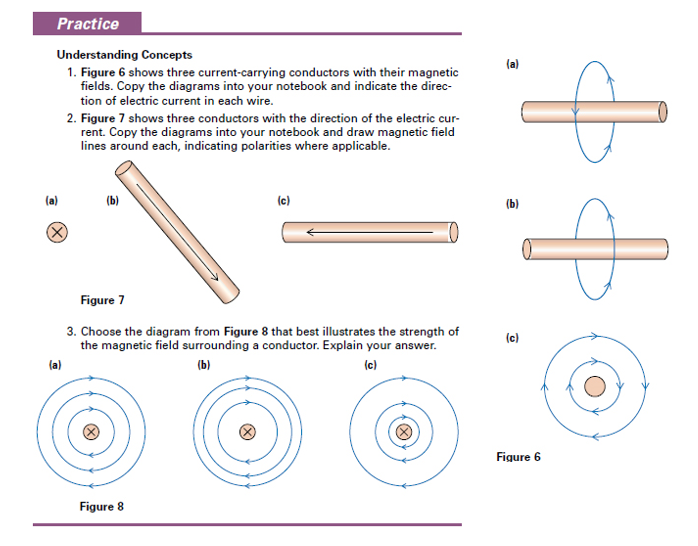
1. Draw the direction of the compass showing Oersted's Principle in each of the following conditions
2. Show the direction of the magnetic field around the conductor in each of the following conditions. Also state if the current is into or out of the page.



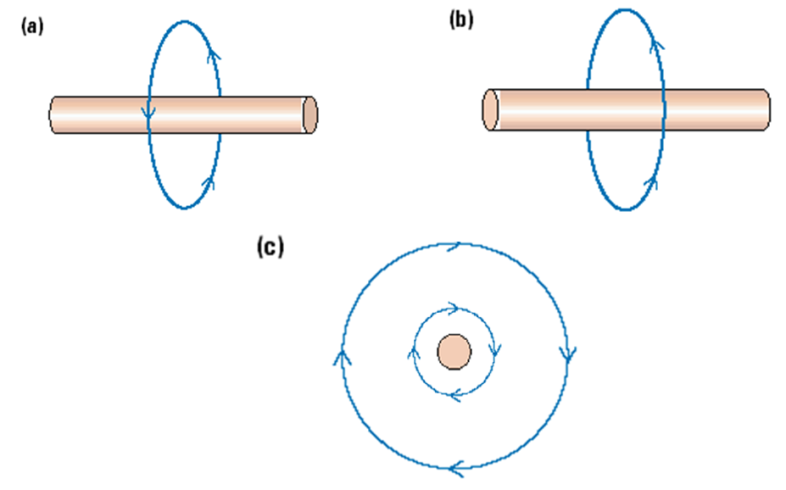
**Right Hand Rule #1**

1. Summarize the Right Hand Rule for Conductors as follows:
   1. Your Thumb points in the direction of:
   2. Your Fingers curl in the direction of:
   3. The direction of the field depends on the:
   4. The shape of the field is:
2. Draw a diagram showing how to use the right hand rule.

**Questions**



1. Use the Right Hand Rule to determine the direction of current for each of the following wires.



1. Use the Right Hand Rule to predict if the following parallel wires will attract or repel.



1. Use the Right Hand Rule to predict if the following parallel wires will attract or repel.

