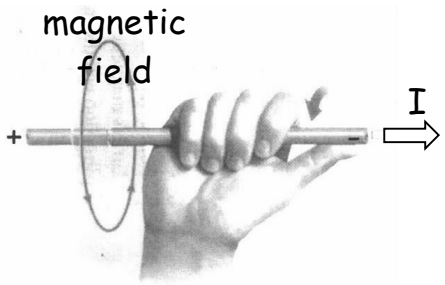
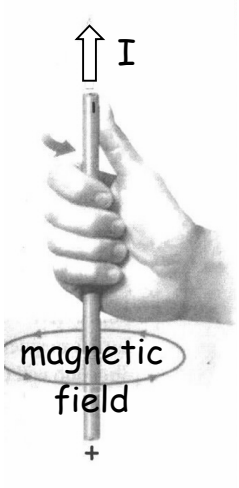
Work Sheet – Electromagnetism

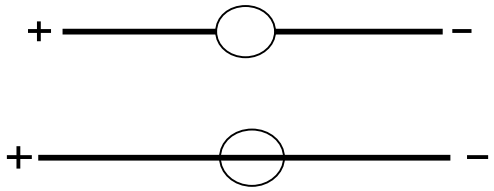
Right-Hand Rule #1:

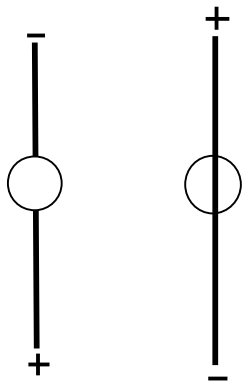
Use the rule (shown in two versions) to answer these questions:





1. In the diagrams below, a compass is placed above or beneath each wire. Draw a large arrow to the side, showing the direction of the current. Then draw the compass needles, showing the direction they point.

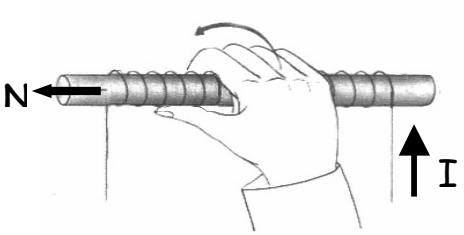




2. This cross-section view of a wire shows the current moving (into, out of) the page. Draw arrows showing the direction of the magnetic field around the wire.

3. This cross-section view of a wire shows the current moving (into, out of) the page. Draw arrows showing the direction of the magnetic field around the wire.

Right-Hand Rule #2: *(You do not have to apply this rule.)*



1. The linear coil of conducting wire is called a _____.

2. When a soft iron core is placed inside the wire, an _____ is created. To increase the strength of this magnet, you can increase _____ and increase _____.

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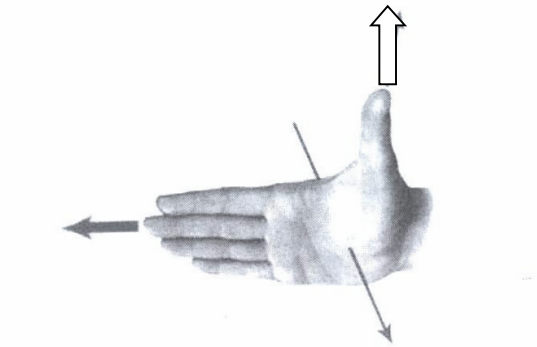
Right-Hand Rule #3 (the generator rule):

Use your notes to show what each arrow represents. (This will be given to you on a test.)



In each case below, use the right-hand rule above to determine the direction the current will flow. Draw an arrow on the wire to show the direction of the current. Draw an "X" if no current will flow.