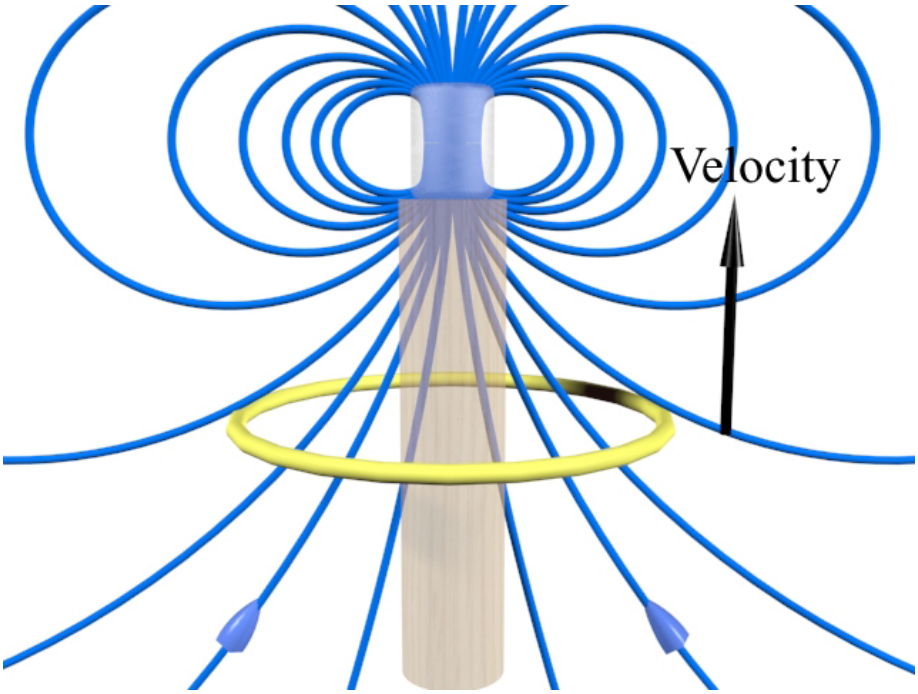
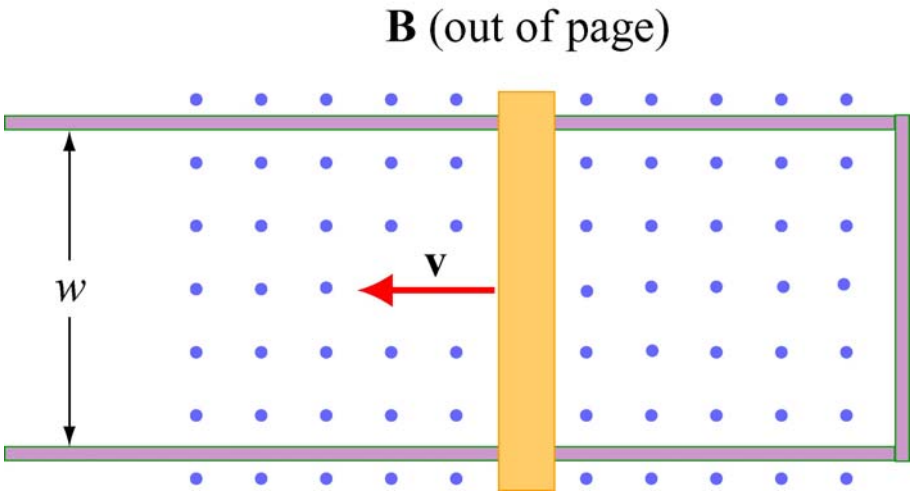
Faraday's Law: Loop



A coil moves up from underneath a magnet with its north pole pointing upward. The current in the coil and the force on the coil:

1. Current clockwise; force up
2. Current counterclockwise; force up
3. Current clockwise; force down
4. Current counterclockwise; force down

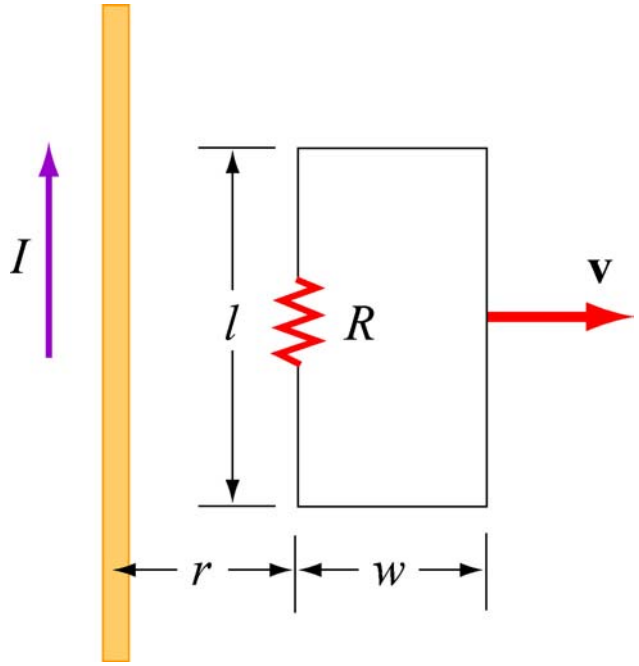
Faraday's Law: Rails



A conducting rod moves along conducting rails in a magnetic field which is out of the page. The current in the rod and the force on the rod are:

1. Current up and force to left
2. Current down and force to left
3. Current up and force to right
4. Current down and force to right

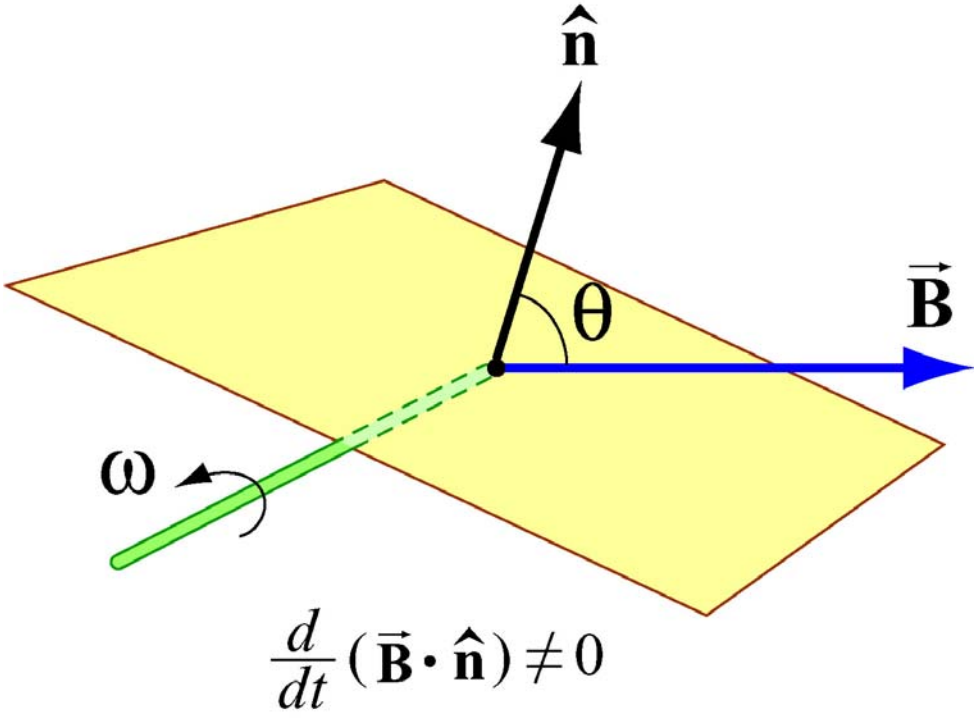
Faraday's Law: Loop



A circuit in the form of a rectangular piece of wire is pulled away from a long wire carrying current *I* in the direction shown in the sketch. The induced current in the rectangular circuit is

1. Clockwise
2. Counterclockwise
3. Neither, the current is zero

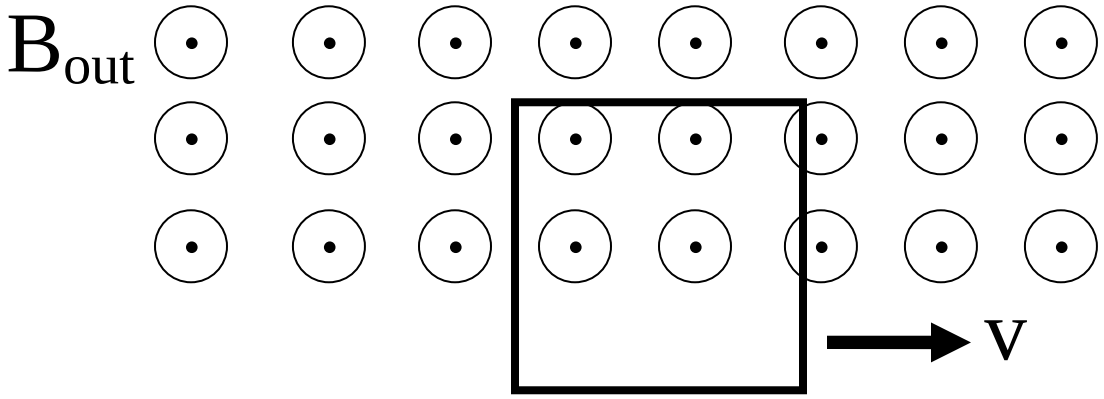
Faraday's Law: Generator



A square coil rotates in a magnetic field directed to the right. At the time shown, the current in the square, when looking down from the top of the square loop, will be

1. Counterclockwise.
2. Clockwise

Loop in Uniform Field



A rectangular wire loop is pulled thru a uniform magnetic field penetrating its top half, as shown. The induced current and the force and torque on the loop are:

1. Current CW, Force Left, No Torque
2. Current CW, No Force, Torque Rotates CCW
3. Current CCW, Force Left, No Torque
4. Current CCW, No Force, Torque Rotates CCW
5. No current, force or torque