

Magnetism Right Hand Rules

Right Hand Rule # 1: The direction of the magnetic field (B) around a current carrying wire.

- 1) Put down you pencil;
- 2) Thumb in the direction of the current in the wire;
- 3) With the wire (pencil) in the palm, the fingers wrap around the wire in the direction of the magnetic field (always concentric circles with the wire at its center).

Right Hand Rule # 2: The direction of the magnetic force on a moving charged particle.

- 1) Thumb in the direction of the velocity;
- 2) Fingers in the direction of the magnetic field;
- 3) Palm points in the direction of the force on a + charge;
Or B slap a – charge with the back of your hand.

Right Hand Rule # 3: The direction of the current induced in the loop in response to the changing B.

- 1) Determine the amount and direction of the magnetic field in the loop of wire.
- 2) Determine how the field is changing.
- 3) The loop will create a current to CANCEL that change by:
 - a. Fingers point through the loop in the direction of the magnetic field.
 - b. Grab the wire with your palm.
 - c. Thumb points in the direction of the current.