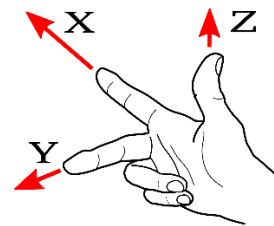
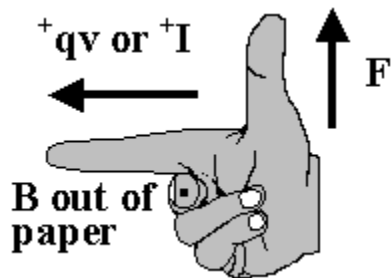


## The Right Hand Rules

### 1<sup>st</sup> Right Hand Rule:

Used to determine the direction of velocity, direction of the magnetic field and the direction of the force on a charge.

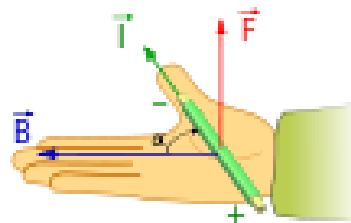
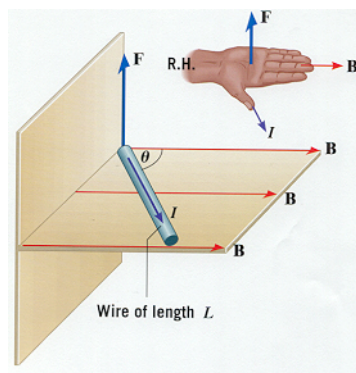
- Index Finger: Points direction of velocity of positive charge. (If the moving charge is negative, point your finger opposite to its direction of motion.)
- Middle Finger (Bent): Points in direction of the magnetic field.
- Thumb: Points the direction of the force.



### 2<sup>nd</sup> Right Hand Rule:

Used to find the direction of the force on a current-carrying wire in a magnetic field.

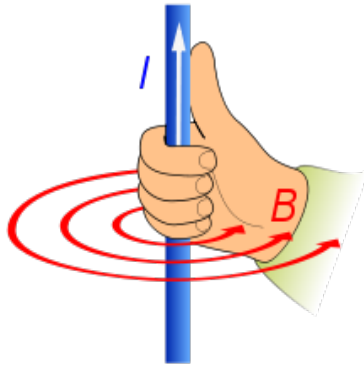
- Point fingers of right hand in direction of magnetic field.
- Point thumb in direction of (+) flow of the current in the wire.
- Palm will be facing the direction of the force acting on the wire.



### 3<sup>rd</sup> Right Hand Rule

Used to find the direction of the magnetic field for a current carrying straight wire:

- Grasp wire with right hand
- Thumb should point in direction of (+) flow of the current.
- Fingers will be pointing in direction of magnetic field.



### 4<sup>th</sup> Right Hand Rule:

Used to find direction of the magnetic field produced by an electromagnet.

- Grasp coil with right hand
- Curl fingers around coil in direction of (+) flow of the current
- Thumb will be pointing toward the North Pole of the electromagnet.

