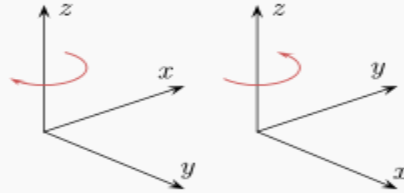
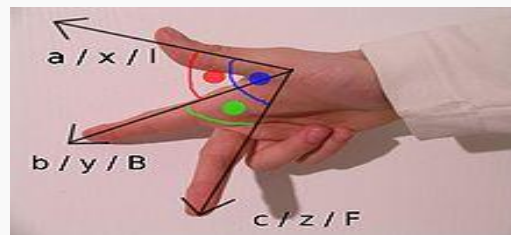


# RIGHT-HAND RULE



The left-handed orientation is shown on the left, and the right-handed on the right.



Use of right hand.

In mathematics and physics, the right-hand rule is a common mnemonic for understanding notation conventions for vectors in 3 dimensions. It was invented for use in electromagnetism by British physicist John Ambrose Fleming in the late 19th century.

When choosing three vectors that must be at right angles to each other, there are two distinct solutions, so when expressing this idea in mathematics, one must remove the ambiguity of which solution is meant.

There are variations on the mnemonic depending on context, but all variations are related to the one idea of choosing a convention.

# Applications

The first form of the rule is used to determine the direction of the cross product of two vectors. This leads to widespread use in physics, wherever the cross product occurs. A list of physical quantities whose directions are related by the right-hand rule is given below.

- The angular velocity of a rotating object and the rotational velocity of any point on the object
- A torque, the force that causes it, and the position of the point of application of the force
- A magnetic field, the position of the point where it is determined, and the electric current (or change in electric flux) that causes it
- A magnetic field in a coil of wire and the electric current in the wire
- The force of a magnetic field on a charged particle, the magnetic field itself, and the velocity of the object
- The vorticity at any point in the field of flow of a fluid
- The induced current from motion in a magnetic field (known as Fleming's right hand rule)

Source: [http://web.ua.es/docivis/magnet/righthand\\_rule.html](http://web.ua.es/docivis/magnet/righthand_rule.html)