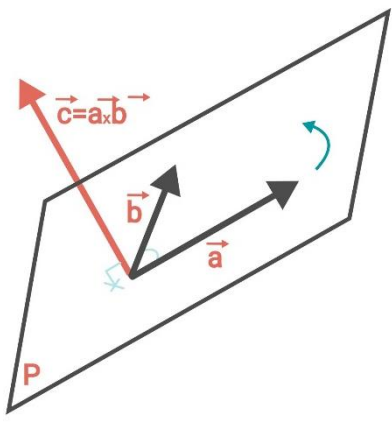
Given two vectors in 3 dimensions, that is, with three components, we can define a new operation: the vector product. The vector product between two vectors $\vec{a}$ and $\vec{b}$ is another vector $\vec{c}$.

We define the vector product by: $\vec{c}=\vec{a}\times\vec{b}$. Also, it is possible to denote the vector product using the symbol $\wedge$. So that $\vec{c}=\vec{a}\wedge\vec{b}$.

The resultant vector $\vec{c}$ to the vector product between two vectors $\vec{b}$ has the following properties:

1. The angle is perpendicular to the plane formed by two vectors $\vec{a}$ and $\vec{b}$.
2. The direction of the vector $\vec{c}$ is given by applying the "rule of the corkscrew" or the "rule of the right hand":



It is the direction of rotation a corkscrew would move when opening a bottle. With a corkscrew, or a screw "towards the right" (clockwise,) the corkscrew or the screw "goes into" the bottle. Also, it is possible to use the corkscrew or a screw in another sense: when one screws a corkscrew "towards the left" (counterclockwise), the corkscrew or the screw "comes out" of the bottle).