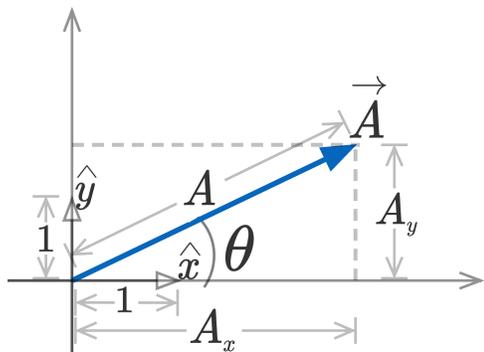


VECTORES

Vector



$$\vec{A} = A_x \hat{x} + A_y \hat{y}$$

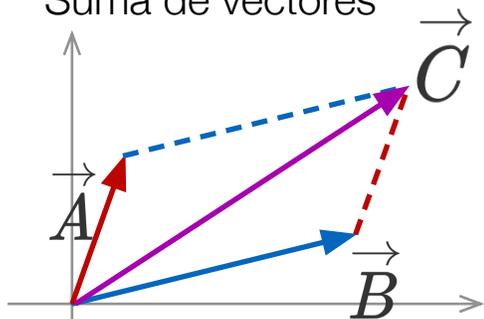
$$A_x = A \cos \theta$$

$$A_y = A \sin \theta$$

$$A = \sqrt{A_x^2 + A_y^2} = |\vec{A}|$$

$$\theta = \arctan\left(\frac{A_y}{A_x}\right)$$

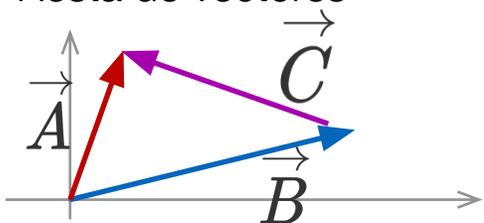
Suma de vectores



$$\vec{C} = \vec{A} + \vec{B}$$

$$= (A_x + B_x) \hat{x} + (A_y + B_y) \hat{y}$$

Resta de vectores



$$\vec{C} = \vec{A} - \vec{B} = (A_x - B_x) \hat{x} + (A_y - B_y) \hat{y}$$

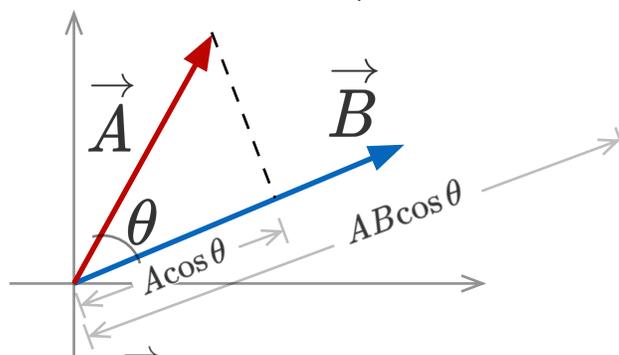
Notación de "matriz"

$$a \hat{x} + b \hat{y} = (a, b) = \vec{X}$$

Multiplicación de vector por escalar (escalar=número)

$$n \vec{A} = n A_x \hat{x} + n A_y \hat{y}$$

Producto punto (vector punto vector da escalar)



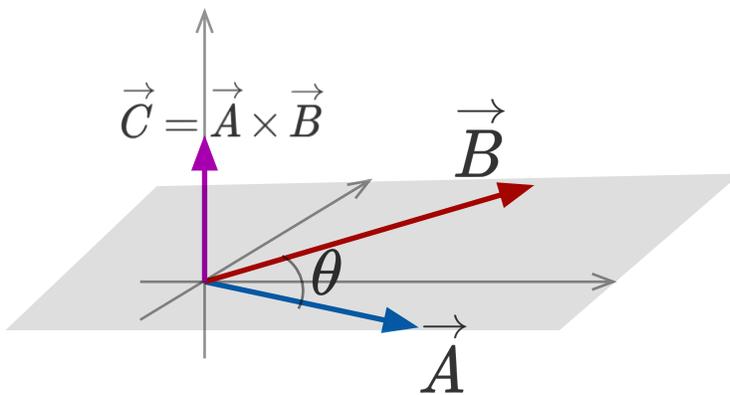
$$\vec{A} = A_x \hat{x} + A_y \hat{y}$$

$$\vec{B} = B_x \hat{x} + B_y \hat{y}$$

$$\vec{A} \cdot \vec{B} = A_x B_x + A_y B_y$$

$$\vec{A} \cdot \vec{B} = AB \cos \theta$$

Producto cruz (vector cruz vector da vector)



$$\vec{C} = \vec{A} \times \vec{B}$$

$$C_z = AB \sin \theta$$

Signo: regla de la mano derecha