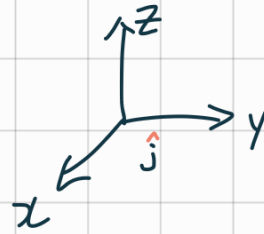


$\vec{a} \times \vec{b}$  외적 (Cross product)  $\Rightarrow$  벡터가 나뉘

$\vec{a} \cdot \vec{b}$  내적 (dot product)



$$\vec{a} = (3, 2, 5) = 3\hat{i} + 2\hat{j} + 5\hat{k}$$

$$\vec{b} = (2, 3, 2) = 2\hat{i} + 3\hat{j} + 2\hat{k}$$



$\vec{a} \times \vec{b}$  크기  $= |\vec{a}| |\vec{b}| \sin \theta$

$$\begin{vmatrix} \hat{i} & \hat{j} & \hat{k} \\ 3 & 2 & 5 \\ 2 & 3 & 2 \end{vmatrix} = \hat{i} \begin{vmatrix} 2 & 5 \\ 3 & 2 \end{vmatrix} - \hat{j} \begin{vmatrix} 3 & 5 \\ 2 & 3 \end{vmatrix} + \hat{k} \begin{vmatrix} 3 & 2 \\ -1 & 1 \end{vmatrix}$$

$$(6-5)\hat{i} - 19\hat{j} + 5\hat{k}$$

$$\hat{i} - 19\hat{j} + 5\hat{k}$$



$$\vec{a} \times \vec{b} = \vec{b} \times \vec{a} \quad \text{역순은 방향(?)}$$