

Parallel Vectors

$$\vec{OA} = \langle A_x, A_y, A_z \rangle$$

Dot Product

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

Vector component

$$\vec{A} \cdot \vec{B} = |\vec{A}| |\vec{B}| \cos \alpha,$$

Magnitude of vectors

$$A \times B = |A| |B| \sin \theta$$

Cross Product

$$a \times b = 0$$