

$$(3) \cos a = \vec{b} \cdot \vec{c}$$

$$\vec{b} \cdot \vec{c} = \|\vec{b}\| \cdot \|\vec{c}\| \cdot \cos \angle(\vec{b}, \vec{c}) = \|\vec{b}\| \cdot \|\vec{c}\| \cdot \cos a$$

$$\Rightarrow \cos a = \vec{b} \cdot \vec{c}$$

$$\cos b = \vec{c} \cdot \vec{a}$$

$$\vec{c} \cdot \vec{a} = \|\vec{c}\| \cdot \|\vec{a}\| \cdot \cos \angle(\vec{c}, \vec{a}) = \|\vec{c}\| \cdot \|\vec{a}\| \cos b \Rightarrow \cos b = \vec{c} \cdot \vec{a}$$

$$(4) \sin a = \|\vec{b} \times \vec{c}\|$$

$$\|\vec{b} \times \vec{c}\| = \|\vec{b}\| \cdot \|\vec{c}\| \cdot \sin \angle(\vec{b}, \vec{c}) = \|\vec{b}\| \cdot \|\vec{c}\| \cdot \sin a$$

$$\Rightarrow \sin a = \|\vec{b} \times \vec{c}\|$$

$$\sin b = \|\vec{c} \times \vec{a}\| \dots$$

$$(5) \cos \gamma = \frac{(\vec{c} \times \vec{a}) \cdot (\vec{c} \times \vec{b})}{\|\vec{c} \times \vec{a}\| \cdot \|\vec{c} \times \vec{b}\|}$$

disgliedern (2)

