

e-01-8-021

$$\vec{a} = (2, 4, 4)$$

$$|\vec{a}| = \sqrt{2^2 + 4^2 + 4^2}$$

$$\hat{a} = \frac{\vec{a}}{|\vec{a}|} = \frac{(2, 4, 4)}{6} = \left(\frac{1}{3}, \frac{2}{3}, \frac{2}{3}\right)$$

$$\vec{b} = \hat{a} \times 2 = \left(\frac{2}{3}, \frac{4}{3}, \frac{4}{3}\right)$$

$$|\vec{a}| |\vec{x}| \cos \theta = \vec{a} \cdot \vec{x}$$

$$6 \cos \theta = 2$$

$$\theta = 70.5^\circ$$

$\vec{x}$  is 30° or 150°