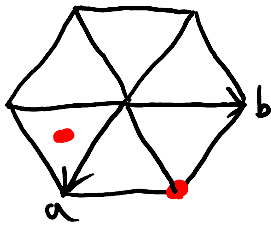


# prob. 5

2008년 9월 29일 월요일

오후 12:35



$$\vec{p} = (1 \ 1 \ 1)$$

$$\vec{q} = (1/3 \ -1/3 \ 1/2)$$

$$\tilde{G} = \begin{pmatrix} a^2 & -a^2/2 & 0 \\ -a^2/2 & a^2 & 0 \\ 0 & 0 & c^2 \end{pmatrix}$$

$$|\vec{p}|^2 = p \tilde{G} p^T = 3.56 a^2 = (1.887 a)^2$$

$$|\vec{q}|^2 = q \tilde{G} q^T = 0.973 a^2 = (0.987 a)^2$$

$$\vec{p} \cdot \vec{q} = p \tilde{G} q^T = 1.28 a^2$$

$$\cos \theta = \frac{\vec{p} \cdot \vec{q}}{|\vec{p}| |\vec{q}|} = \frac{1.28}{1.887 \cdot 0.987} = 0.687$$

$$\theta = 46.6^\circ$$