$$\begin{vmatrix}
i & 1 \\
i' & 1
\end{vmatrix} = \frac{1}{i'} \frac{1}{1} = \frac{1}{i'} \frac{1}{1} = \frac{\delta_{i'}^{i}}{2^{1/3}}$$

$$\begin{vmatrix}
i & 2 \\
i' & 2
\end{vmatrix} = \frac{(\sigma_{z})_{i'}^{i}}{2^{1/3}} \quad 2^{\frac{i}{1}} \frac{2}{1} = \frac{(\sigma_{x})_{i'}^{i}}{2^{1/3}}$$
1..4

(a)

 $\left(\frac{I+K}{2}\right) \longrightarrow \phi - \phi$ 

 $\underbrace{\frac{2^{i}}{i'}}_{i'} = \underbrace{\left(\sigma_{z}\right)_{i'}^{i}}_{2^{1/3}}$