

In[•]:= $\frac{1}{\sqrt{2}} \{ \{0, 1, 0\}, \{1, 0, 1\}, \{0, 1, 0\} \}$ // Eigenvalues
[特征值]

Out[•]= $\{-1, 1, 0\}$

Normalize /@ Eigenvectors $\left[\frac{1}{\sqrt{2}} \{ \{0, 1, 0\}, \{1, 0, 1\}, \{0, 1, 0\} \} \right]$
[正规化] [特征向量]

Out[•]= $\left\{ \left\{ \frac{1}{2}, -\frac{1}{\sqrt{2}}, \frac{1}{2} \right\}, \left\{ \frac{1}{2}, \frac{1}{\sqrt{2}}, \frac{1}{2} \right\}, \left\{ -\frac{1}{\sqrt{2}}, 0, \frac{1}{\sqrt{2}} \right\} \right\}$