

$$\left\{ \begin{array}{c} \alpha |0\rangle + \beta |1\rangle \\ \hline \hline \hline \hline \hline \hline \hline \hline \end{array} \right\} \left\{ \begin{array}{c} \bullet \quad \bullet \quad \bullet \\ | \\ \oplus \quad \bullet \quad \oplus \\ | \\ \oplus \quad \bullet \quad \oplus \\ | \\ \oplus \quad \bullet \quad \oplus \\ | \\ \oplus \quad \bullet \quad \oplus \end{array} \right\} \alpha |0\rangle^{\otimes n} + \beta |1\rangle^{\otimes n} = \begin{array}{c} \alpha |0\rangle + \beta |1\rangle \bullet \\ \oplus \\ \oplus \\ \oplus \\ \oplus \\ \oplus \\ \oplus \\ \oplus \\ \oplus \end{array}$$

$\underbrace{\hspace{10em}}_{\log_2 n}$