

Dual-unitary gates

- Time evolution generated by two-site **unitary gates**

$$U = \text{blue square with four legs} \quad U^\dagger = \text{red square with four legs}$$

- Unitarity can be graphically represented as

$$\begin{array}{c} \text{blue} \\ \text{red} \end{array} = \begin{array}{c} \text{red} \\ \text{blue} \end{array} = \text{identity lines}$$

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$$\begin{array}{c} \text{red} \\ \text{blue} \end{array} = \text{identity lines} \quad \begin{array}{c} \text{red} \\ \text{blue} \end{array} = \text{identity lines}$$