

A diagrammatic equation showing the relationship between a unitary gate U_g and its adjoint $U_{g^{-1}}$. On the left, a vertical line with an arrow pointing left is labeled U_g . In the center is an equals sign. On the right, a vertical line with an arrow pointing right is labeled $U_{g^{-1}}$.

$$\begin{array}{c}
 \text{---} \leftarrow \\
 | \\
 U_g
 \end{array}
 =
 \begin{array}{c}
 \text{---} \rightarrow \\
 | \\
 U_{g^{-1}}
 \end{array}$$