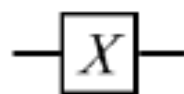


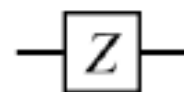
Gate

Notation

Matrix

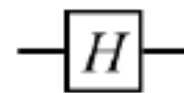
NOT
(Pauli- X)

$$\begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$$

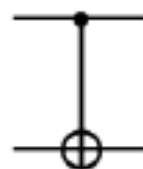
Pauli- Z 

$$\begin{bmatrix} 1 & 0 \\ 0 & -1 \end{bmatrix}$$

Hadamard



$$\frac{1}{\sqrt{2}} \begin{bmatrix} 1 & 1 \\ 1 & -1 \end{bmatrix}$$

CNOT
(Controlled NOT)

$$\begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 \\ 0 & 0 & 1 & 0 \end{bmatrix}$$