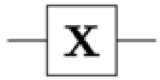
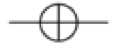
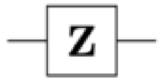
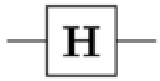
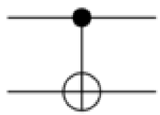
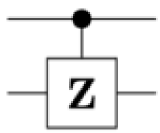
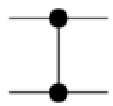
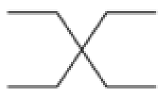
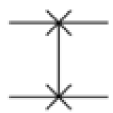
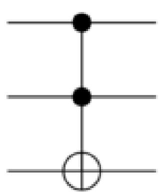
Operator	Gate(s)	Effect (Z)	Effect (X)
Pauli-X (X)	 	$\lvert 0\rangle \Rightarrow \lvert 1\rangle$ $\lvert 1\rangle \Rightarrow \lvert 0\rangle$	$\lvert +\rangle \Rightarrow \lvert +\rangle$ $\lvert -\rangle \Rightarrow -\lvert -\rangle$
Pauli-Z (Z)		$\lvert 0\rangle \Rightarrow \lvert 0\rangle$ $\lvert 1\rangle \Rightarrow -\lvert 1\rangle$	$\lvert +\rangle \Rightarrow \lvert -\rangle$ $\lvert -\rangle \Rightarrow \lvert +\rangle$
Hadamard (H)		$\lvert 0\rangle \Rightarrow \lvert +\rangle$ $\lvert 1\rangle \Rightarrow \lvert -\rangle$	$\lvert +\rangle \Rightarrow \lvert 0\rangle$ $\lvert -\rangle \Rightarrow \lvert 1\rangle$
Controlled Not (CNOT, CX)		$\lvert 00\rangle \Rightarrow \lvert 00\rangle$ $\lvert 01\rangle \Rightarrow \lvert 11\rangle$ $\lvert 10\rangle \Rightarrow \lvert 10\rangle$ $\lvert 11\rangle \Rightarrow \lvert 01\rangle$	
Controlled Z (CZ)	 	$\lvert 00\rangle \Rightarrow \lvert 00\rangle$ $\lvert 01\rangle \Rightarrow \lvert 01\rangle$ $\lvert 10\rangle \Rightarrow \lvert 10\rangle$ $\lvert 11\rangle \Rightarrow -\lvert 11\rangle$	
SWAP	 	$\lvert 00\rangle \Rightarrow \lvert 00\rangle$ $\lvert 01\rangle \Rightarrow \lvert 10\rangle$ $\lvert 10\rangle \Rightarrow \lvert 01\rangle$ $\lvert 11\rangle \Rightarrow \lvert 11\rangle$	$\lvert ++\rangle \Rightarrow \lvert ++\rangle$ $\lvert +-\rangle \Rightarrow \lvert -+\rangle$ $\lvert -+\rangle \Rightarrow \lvert +-\rangle$ $\lvert --\rangle \Rightarrow \lvert --\rangle$
Toffoli (CCNOT, CCX, TOFF)		$\lvert 000\rangle \Rightarrow \lvert 000\rangle$ $\lvert 100\rangle \Rightarrow \lvert 100\rangle$ $\lvert 001\rangle \Rightarrow \lvert 001\rangle$ $\lvert 101\rangle \Rightarrow \lvert 101\rangle$ $\lvert 010\rangle \Rightarrow \lvert 010\rangle$ $\lvert 110\rangle \Rightarrow \lvert 110\rangle$ $\lvert 011\rangle \Rightarrow \lvert 111\rangle$ $\lvert 111\rangle \Rightarrow \lvert 011\rangle$	

Adapted from the table at https://en.wikipedia.org/wiki/Quantum_logic_gate .

Basis Vectors

$$|0\rangle = \begin{pmatrix}1\\0\end{pmatrix} \qquad |1\rangle = \begin{pmatrix}0\\1\end{pmatrix}$$

$$|00\rangle = \begin{pmatrix}1\\0\\0\\0\end{pmatrix},\ |01\rangle = \begin{pmatrix}0\\1\\0\\0\end{pmatrix},\ |10\rangle = \begin{pmatrix}0\\0\\1\\0\end{pmatrix},\ |11\rangle = \begin{pmatrix}0\\0\\0\\1\end{pmatrix}$$

Interference Rules

$$|+\rangle = \sqrt{\frac{1}{2}}\,|0\rangle + \sqrt{\frac{1}{2}}\,|1\rangle \equiv |0\rangle + |1\rangle$$

$$|-\rangle = \sqrt{\frac{1}{2}}\,|0\rangle - \sqrt{\frac{1}{2}}\,|1\rangle \equiv |0\rangle - |1\rangle$$

$$|0\rangle = \sqrt{\frac{1}{2}}\,|+\rangle + \sqrt{\frac{1}{2}}\,|-\rangle \equiv |+\rangle + |-\rangle$$

$$|1\rangle = \sqrt{\frac{1}{2}}\,|+\rangle - \sqrt{\frac{1}{2}}\,|-\rangle \equiv |+\rangle - |-\rangle$$

Dirac Notation

$$\boxed{|x\rangle = \begin{pmatrix}a\\b\end{pmatrix} \quad \Rightarrow \quad |x\rangle = a\,|0\rangle + b\,|1\rangle}$$

Measurement Rules

$$\langle 0|0\rangle^2 = 1 \qquad \langle 0|+\rangle^2 = 1/2$$

$$\langle 0|1\rangle^2 = 0 \qquad \langle 0|-\rangle^2 = 1/2$$

$$\langle 1|0\rangle^2 = 0 \qquad \langle 1|+\rangle^2 = 1/2$$

$$\langle 1|1\rangle^2 = 1 \qquad \langle 1|-\rangle^2 = 1/2$$

$$\langle +|+\rangle^2 = 1 \qquad \langle +|0\rangle^2 = 1/2$$

$$\langle +|-\rangle^2 = 0 \qquad \langle +|1\rangle^2 = 1/2$$

$$\langle -|+\rangle^2 = 0 \qquad \langle -|0\rangle^2 = 1/2$$

$$\langle -|-\rangle^2 = 1 \qquad \langle -|1\rangle^2 = 1/2$$