

	Notation	Quantum	Classical
Identity (do nothing)	I	$ 0\rangle \longrightarrow 0\rangle$ $ 1\rangle \longrightarrow 1\rangle$	$0 \longrightarrow 0$ $1 \longrightarrow 1$
Pauli X (flip)	X	$ 0\rangle \longrightarrow 1\rangle$ $ 1\rangle \longrightarrow 0\rangle$	$0 \longrightarrow 1$ $1 \longrightarrow 0$
Hadamard (create a superposition)	H	$ 0\rangle \longrightarrow \frac{ 0\rangle + 1\rangle}{\sqrt{2}}$ $ 1\rangle \longrightarrow \frac{ 0\rangle - 1\rangle}{\sqrt{2}}$	