

Pregunta 1:

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

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

$$|\Psi\rangle = \left(\frac{1}{\sqrt{2}}|0\rangle + \frac{1}{\sqrt{2}}|1\rangle\right)\left(\frac{1}{\sqrt{2}}|0\rangle + \frac{1}{\sqrt{2}}|1\rangle\right)\left(\frac{1}{\sqrt{2}}|0\rangle - \frac{1}{\sqrt{2}}|1\rangle\right)$$

$$|\Psi\rangle = \left(\frac{1}{2}|0\rangle|0\rangle + \frac{1}{2}|0\rangle|1\rangle + \frac{1}{2}|1\rangle|0\rangle + \frac{1}{2}|1\rangle|1\rangle\right)\left(\frac{1}{\sqrt{2}}|0\rangle - \frac{1}{\sqrt{2}}|1\rangle\right)$$

$$|\Psi\rangle = \frac{1}{2\sqrt{2}}|010\rangle|0\rangle - \frac{1}{2\sqrt{2}}|010\rangle|1\rangle + \frac{1}{2\sqrt{2}}|011\rangle|0\rangle - \frac{1}{2\sqrt{2}}|011\rangle|1\rangle + \frac{1}{2\sqrt{2}}|110\rangle|0\rangle -$$

$$- \frac{1}{2\sqrt{2}}|110\rangle|1\rangle + \frac{1}{2\sqrt{2}}|111\rangle|0\rangle - \frac{1}{2\sqrt{2}}|111\rangle|1\rangle$$

$$|\Psi\rangle = \frac{1}{2\sqrt{2}}|1000\rangle - \frac{1}{2\sqrt{2}}|1001\rangle + \frac{1}{2\sqrt{2}}|1010\rangle - \frac{1}{2\sqrt{2}}|1011\rangle + \frac{1}{2\sqrt{2}}|1100\rangle - \frac{1}{2\sqrt{2}}|1101\rangle + \frac{1}{2\sqrt{2}}|1110\rangle - \frac{1}{2\sqrt{2}}|1111\rangle$$

• qiskit

Pregunta 2: 2 qubits

Pregunta 3 : • qiskit