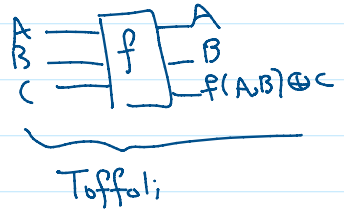
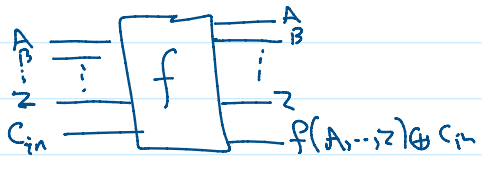


- In general



- More general



- One Qubit chapter 2

- Four postulates of quantum computing:

- ✓ 1. Superposition
- ✓ 2. Measurement
- 3. Quantum gates (time evolution)
- 4. Entanglement

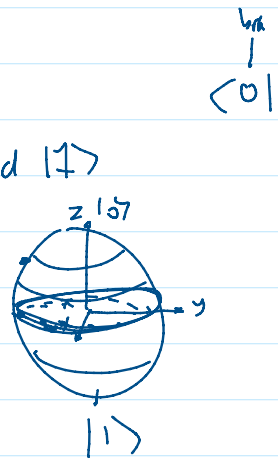
- We will mainly use the computational basis denoted as $|0\rangle$ and $|1\rangle$

- We say a qubit is in a superposition state if

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

coeff. = 1/√2 1/√2

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



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

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