$$|\psi\rangle = \alpha|0\rangle + \beta|1\rangle$$

$$X$$
Basis Result
$$X$$

$$\square + 1$$

$$\square - 1$$
Prob $\{+1\} = |\alpha + \beta|^2/2 \rightarrow \text{ state is } |+\rangle$
Prob $\{-1\} = |\alpha - \beta|^2/2 \rightarrow \text{ state is } |-\rangle$