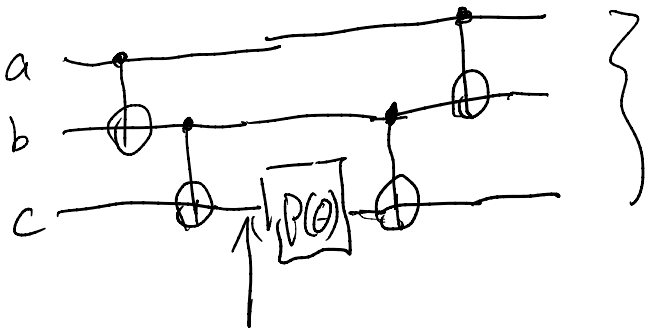


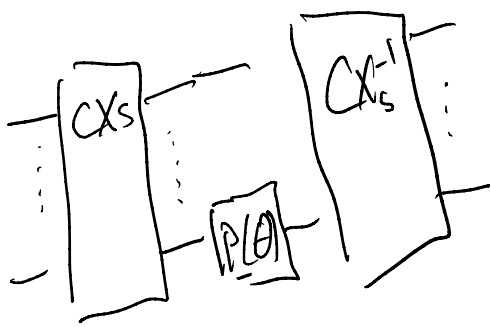


*



$$U|a, b, c\rangle = e^{i\theta(a \oplus b \oplus c)} |a, b, c\rangle$$

$$P(\theta)|a \oplus b \oplus c\rangle = e^{i\theta(a \oplus b \oplus c)} |a \oplus b \oplus c\rangle$$



$$U|a_1, \dots, a_n\rangle = e^{i\theta f(a_1, \dots, a_n)} |a_1, \dots, a_n\rangle$$

$f(a_1, \dots, a_n)$ is a reversible boolean function on a_1, \dots, a_n .

* Phase gadget

