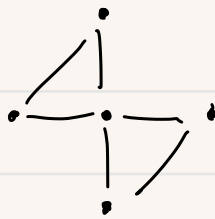
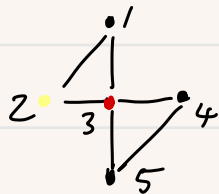
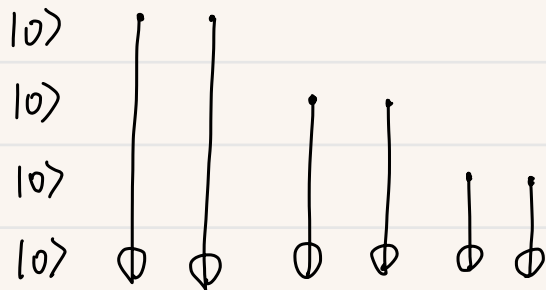


Yorktown



47H qubit

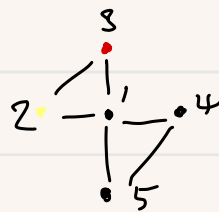


Target & eval full connect

$$2 \times 3 = 6$$

SWAP

1-3



SWAP 2-4

$$1 \times 3 = 3$$

1-4 } 32H
1-5 }
4-5 }

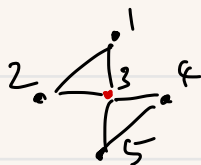
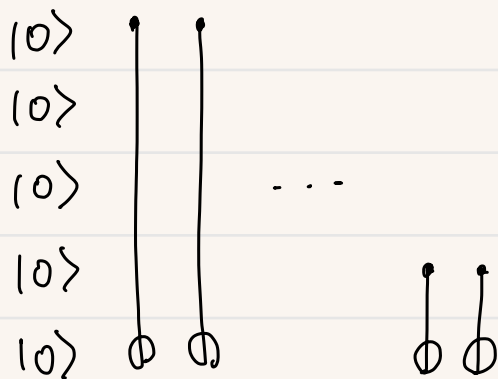
1 QFT

eval $|z|$
full connect

$$2 \times 3 = 6$$

152H

57H qubit

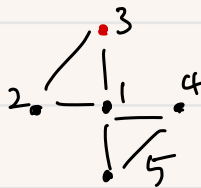


Target & eval full connect

$$2 \times 4 = 8$$

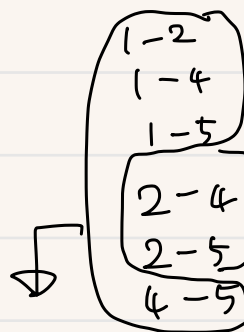
SWAP

1-3



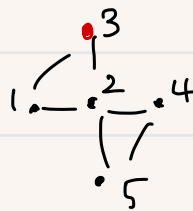
SWAP 2-4

$$2 \times 3 = 6$$



SWAP

2-1

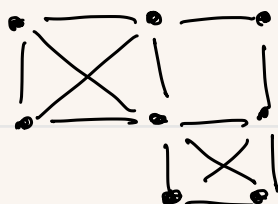


$$6 \times 2 = 12$$

1 QFT

$$8 + 3 + 6 + 3 + 6 = 26 \text{ H}$$

Tokyo



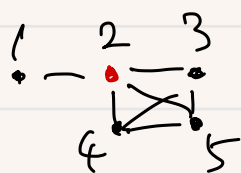
4771 qubit



→ All connected, no swap needed

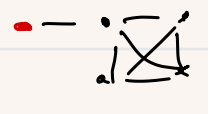
$$\therefore 2 \times 3 + 2 \times 3 = 12 \text{ gate}$$

5 qubit



full connected

$$2 \times 4 = 8$$

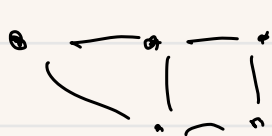
1-2 swap

 eval 2/2
 full connected
 $1 \times 3 = 3$

$$4P_2$$

$$= \frac{4!}{(4-2)!}$$

$$= 12$$

$$8 + 3 + 12 = 23 \text{ gate}$$



or



필요하면

$$26 \text{ gate}$$

Swap 2번 필요