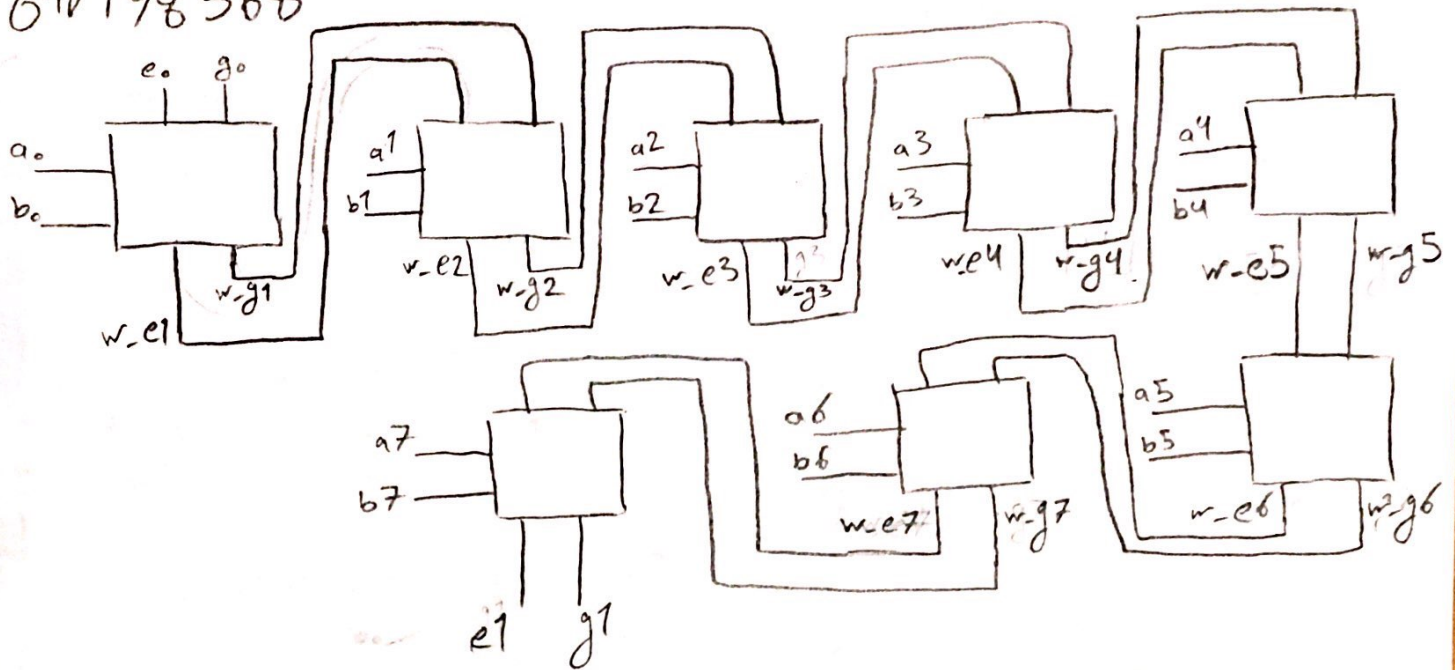
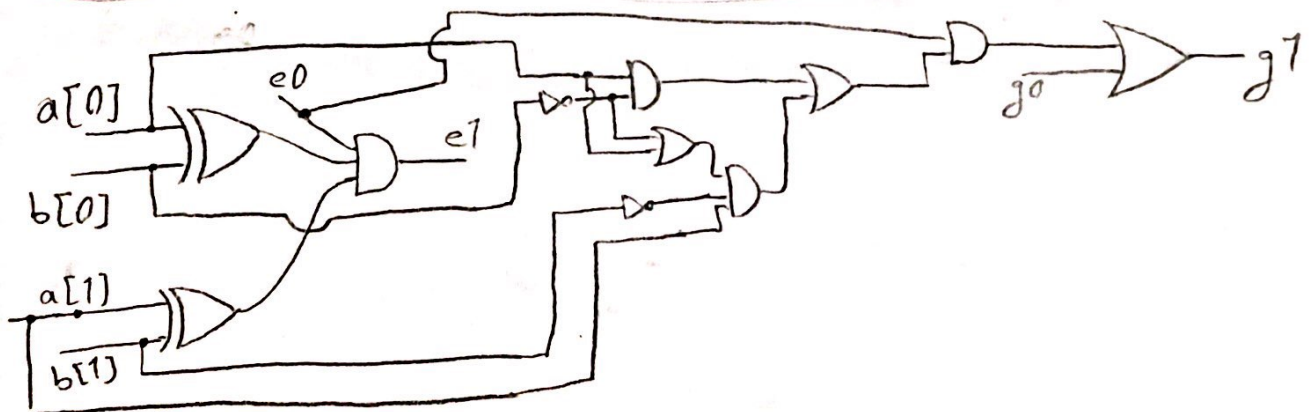


Ali Pakdel Samadi
810198368

CA2



worst case delay to 1 $\rightarrow 169$
worst case delay to 0 $\rightarrow 158$



worst case delay to 1: We start from $g1$, so the OR should go to 1, the AND should go to 1, the OR should go to 1, the 3-input AND should go to 1, the OR should go to 1, the inverter should go to 1.

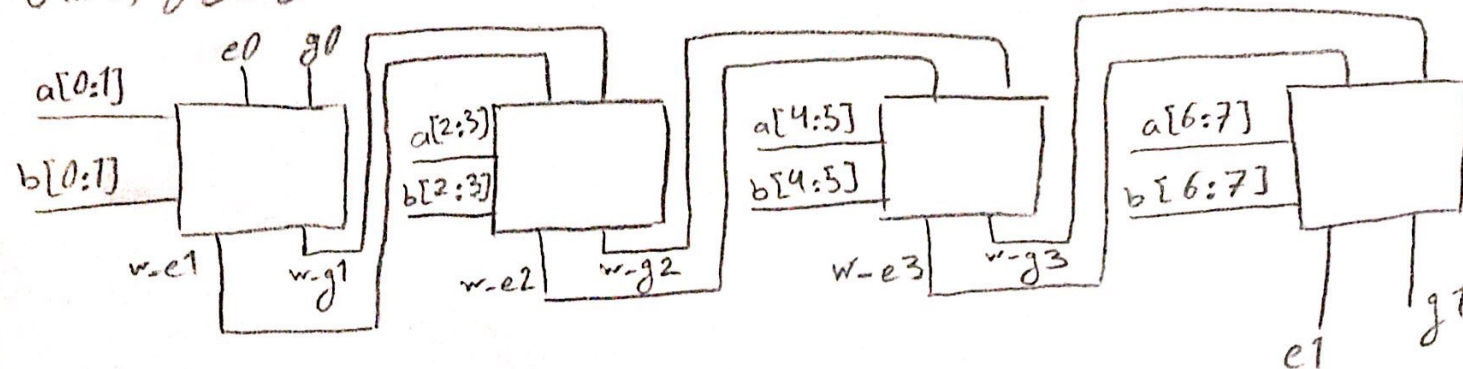
$$\Rightarrow 19 + 13 + 19 + 17 + 19 + 5 = 92$$

worst case delay to 0: We start from $g1$, so the OR should go to 0, the AND should go to 0, the OR should go to 0, the 3-input AND should go to 0, the OR should go to 0, the inverter should go to 0.

$$\Rightarrow 17 + 17 + 17 + 22 + 17 + 7 = 97$$

Ali Pakdel Samadi
810198368

CA 2



worst case delay to 1 \rightarrow 368

worst case delay to 0 \rightarrow 388

Cons of TCS: Has more delay time in changing left bits.
Has more gates.
It can't be cascaded for odd bit numbers.
It need to be implement again.

Pros of TCS: Has less delay time in changing right bits.