Prob 1) $n=16$ $m=12$ TC

$$\left(-x_{15}2^{15} + \sum_{i=0}^{14} x_i 2^i\right)\left(-y_{11}2^{11} + \sum_{j=0}^{10} y_j 2^j\right)$$

$$= x_{15}y_{11}2^{26} + \sum_{i=0}^{14}\sum_{j=0}^{10} x_i y_j 2^{i+j} + \sum_{i=0}^{14} \overline{x_i y_{11}}\, 2^{i+11} + \sum_{j=0}^{10} \overline{x_{15}y_j}\, 2^{j+15} + \left(2^{15}+2^{11}\right) + \left(2^{15+11} + 2^{15+11}\right)$$

$$+2^{15} + 2^{11}$$

↓ ↓

convert HAs to
FA with $c_{in} = 1$

Prob 2)