

DIGITAL LOGIC SYSTEMS : ASSIGNMENT 7

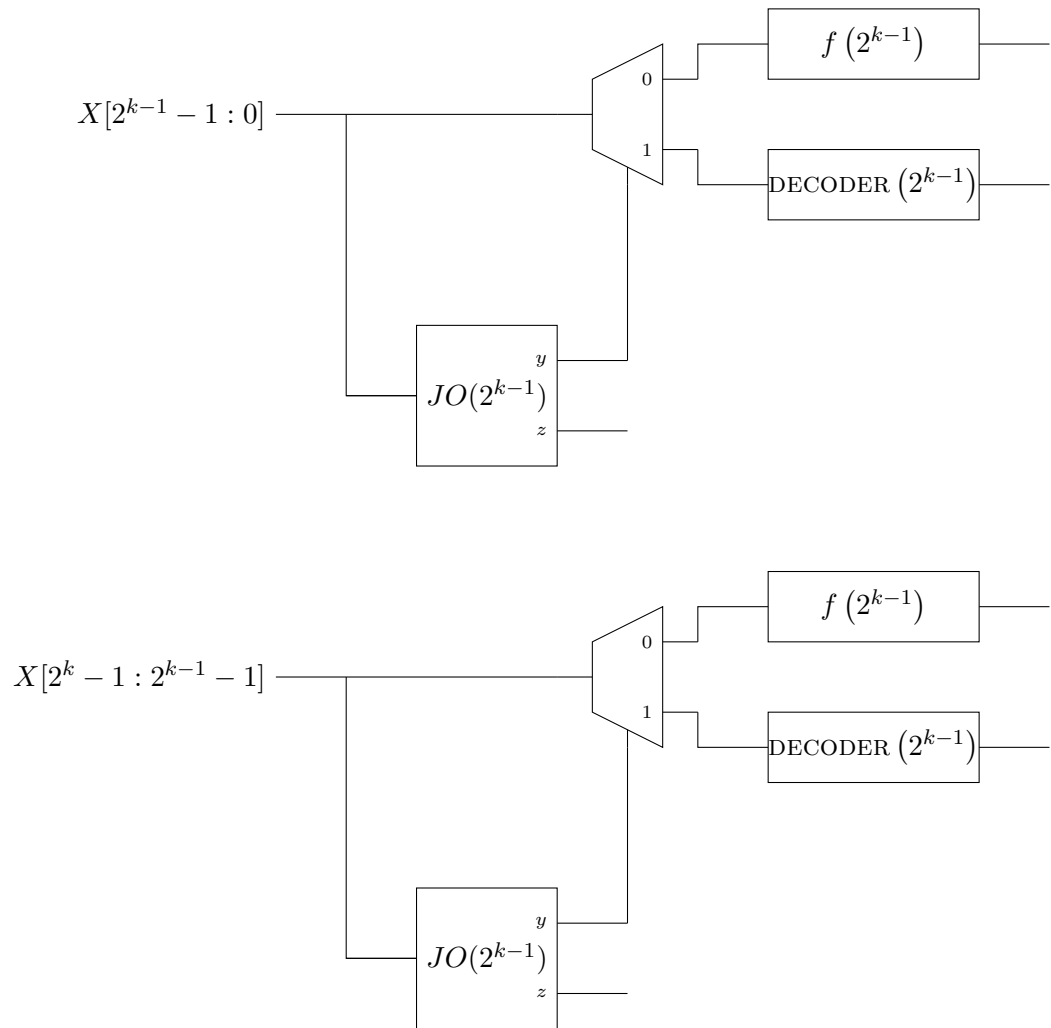
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Exercise 1.

Design a combinational circuit that implements the following specification.

Input $X[2^k - 1 : 0] \in \{0, 1\}^{2^k}$
Output $L, R \in \{0, 1\}^k$
Functionality $wt(X) = 2 \implies X[\langle L \rangle] = X[\langle R \rangle] = 1$

Solution 1.

FIGURE 1. $f(2^k)$