## Problem 1

Implement the following functions using a PLE.

$$
\begin{aligned}
& \mathrm{F}_{1}=\sum \mathrm{m}(0,2,5,7,8,10,12,13) \\
& \mathrm{F}_{2}=\sum \mathrm{m}(0,2,4,5,6,8,10,13,15) \\
& \mathrm{F}_{3}=\sum \mathrm{m}(1,2,3,5,7,9,10,11,13,15)
\end{aligned}
$$

Problem 2
Repeat problem 1 for a PAL. (You must simplify your answer)
Problem 3
Repeat problem 1 for a PLA. (You must simplify your answer)
Note: you may download blank PLD sheets from
http://www.engr.newpaltz.edu/~bai/EGC220/PLD_symbl.pdf and mark programmable cell with $\times$ and fixed cell with $\cdot$.

