

(A) Realizzare le seguenti funzioni utilizzando una sola ROM 16x3

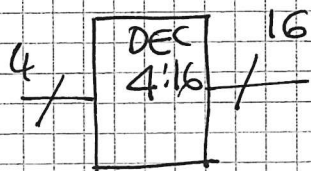
(a)  $X = AB + B\bar{C}D + \bar{A}\bar{B}$

(b)  $Y = AB + BD$

(c)  $Z = A + B + C + D$

(B) Ripetere l'esercizio utilizzando una PLA 4x8x3

(A) Scrivere un DECODER 4:16



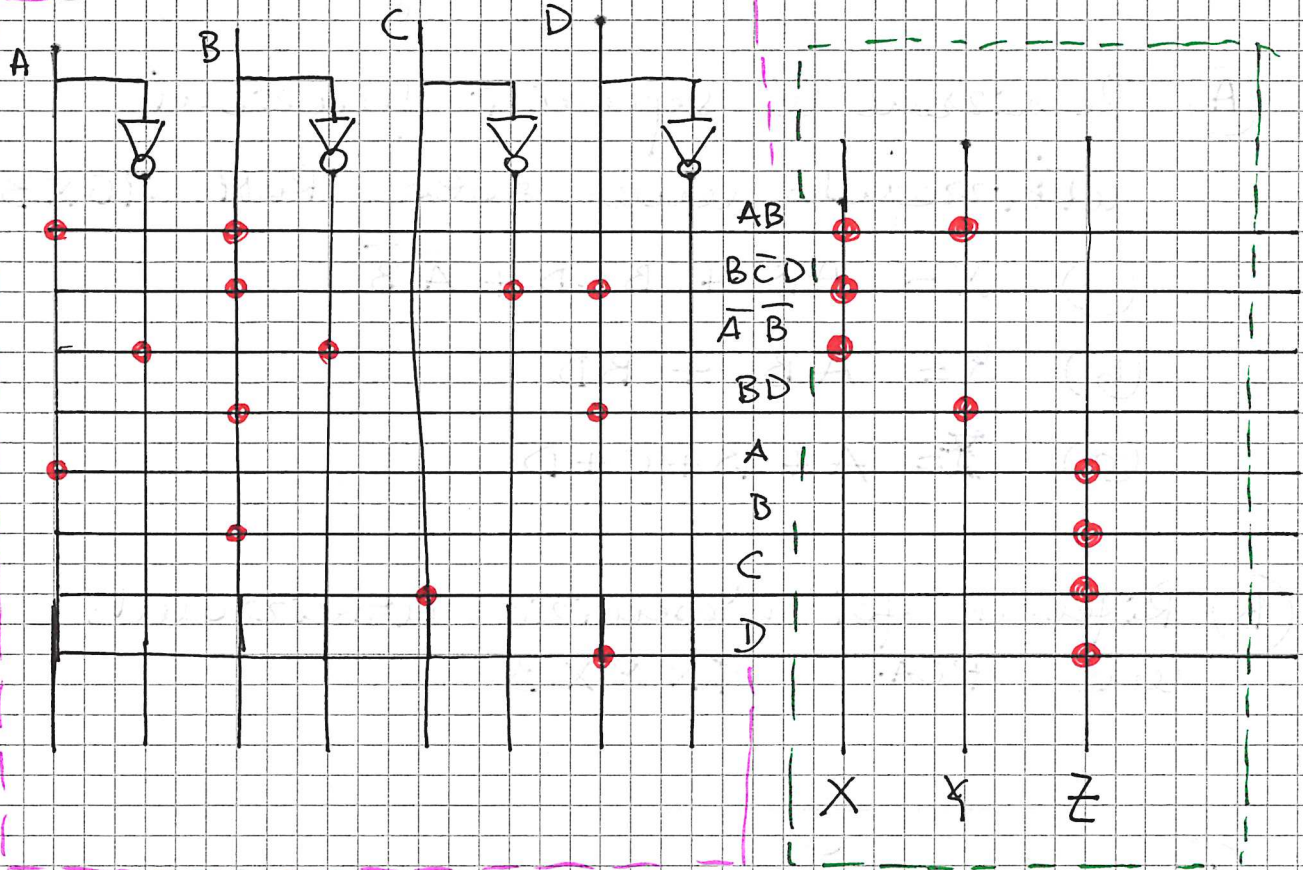
$\Rightarrow$  Le ROM sono con fatte:

	0000	( $\bar{A}\bar{B}\bar{C}\bar{D}$ )			
DEC	0001	( $\bar{A}\bar{B}\bar{C}D$ )			
4:16	0010	( $\bar{A}\bar{B}C\bar{D}$ )			
	0011	( $\bar{A}\bar{B}CD$ )			
	0100	( $\bar{A}B\bar{C}\bar{D}$ )			
	0101	( $\bar{A}B\bar{C}D$ )			
A	0110	( $\bar{A}BC\bar{D}$ )			
B	0111	( $\bar{A}BCD$ )			
C	1000	( $A\bar{B}\bar{C}\bar{D}$ )			
D	1001	( $A\bar{B}\bar{C}D$ )			
	1010	( $A\bar{B}C\bar{D}$ )			
	1011	( $A\bar{B}CD$ )			
	1100	( $AB\bar{C}\bar{D}$ )			
	1101	( $AB\bar{C}D$ )			
	1110	( $ABC\bar{D}$ )			
	1111	( $ABCD$ )			
			X	Y	Z



(B)

Realize the following function



Matrix AND

Matrix OR