

Práctica 7: Funciones lógicas

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No. de lista: 3

1- Ec. canónica de minitérminos
$$y = (\bar{a} \bar{b} \bar{c}) + (\bar{a} \bar{b} c) + (a \bar{b} c) + (a b c)$$

Ec. canónica de maxitérminos
$$y = (a + \bar{b} + c)(a + \bar{b} + \bar{c})(\bar{a} + b + c)(\bar{a} + b + \bar{c})$$

Ec. numérica de minitérminos
$$y = \sum_3 (0, 1, 5, 7)$$

Ec. numérica de maxitérminos
$$y = \prod_3 (2, 3, 4, 6)$$

2- Ec. canónica de minitérminos
$$y = (\bar{x} \bar{y} \bar{z}) + (\bar{x} \bar{y} z) + (x \bar{y} z) + (x y \bar{z})$$

Ec. canónica de maxitérminos
$$y = (x + y + z)(x + y + \bar{z})(\bar{x} + y + z)(\bar{x} + \bar{y} + z)$$

Ec. numérica de minitérminos
$$y = \sum_3 (2, 3, 5, 7)$$

Ec. numérica de maxitérminos
$$y = \prod_3 (0, 1, 4, 6)$$

3- Ec. canónica de minitérminos

$$y = (\bar{m}\bar{n}\bar{o}) + (\bar{m}no) + (m\bar{n}o) + (mn\bar{o}) + (mno)$$

Ec. canónica de maxitérminos

$$y = (m+n+\bar{o})(m+\bar{n}+o)(\bar{m}+n+o)$$

Ec. numérica de minitérminos

$$y = \sum_3 (0, 3, 5, 6, 7)$$

Ec. numérica de maxitérminos

$$y = \prod_3 (1, 2, 4)$$

4- Ec. canónica de minitérminos

$$y = (\bar{a}\bar{b}c) + (abc)$$

Ec. canónica de maxitérminos

$$y = (a+b+c)(a+\bar{b}+c)(a+\bar{b}+\bar{c})(\bar{a}bc)(\bar{a}b\bar{c})(\bar{a}\bar{b}c)$$

Ec. numérica de minitérminos

$$y = \sum_3 (1, 7)$$

Ec. numérica de maxitérminos

$$y = \prod_3 (0, 2, 3, 4, 5, 6)$$

5- Ec. canónica de miniterminos

$$Y_r = (p\bar{q}) + (pq) ; Y_s = (\bar{p}q) + (pq)$$

Ec. canónica de maxiterminos

$$Y_r = (p+q)(p+\bar{q}) ; Y_s = (p+q)(\bar{p}+q)$$

Ec. numérica de miniterminos

$$Y_r = \sum_2 (2, 3) ; Y_s = \sum_2 (1, 3)$$

Ec. numérica de maxiterminos

$$Y_r = \prod_2 (0, 1) ; Y_s = \prod_2 (0, 2)$$

6- Ec. canónica de miniterminos

$$Y_A = (\bar{p}\bar{q}) + (p\bar{q}) + (pq) ; Y_B = (pq)$$

Ec. canónica de maxiterminos

$$Y_A = (p+\bar{q}) ; Y_B = (p+q)(p+\bar{q})(\bar{p}+q)$$

Ec. numérica de miniterminos

$$Y_A = \sum_2 (0, 2, 3) ; Y_B = \sum_2 (3)$$

Ec. numérica de maxiterminos

$$Y_A = \prod_2 (1) ; Y_B = \prod_2 (0, 1, 2)$$

7- Ecuación canónica de miniterminos

$$y = (\bar{m}\bar{n}\bar{o}) + (\bar{m}\bar{n}o) + (\bar{m}n\bar{o}) + (\bar{m}no) + (m\bar{n}\bar{o}) + (m\bar{n}o) + (mn\bar{o}) + (mno)$$

Ec. canónica de maxiterminos

Ec. numérica de miniterminos

$$y = \sum_3 (0, 1, 2, 3, 4, 5, 6, 7)$$

Ec. numérica de maxiterminos

8- Ecuación canónica de miniterminos

$$y_q = (\bar{m}\bar{n}\bar{o}\bar{p}) + (\bar{m}\bar{n}o\bar{p}) + (\bar{m}n\bar{o}\bar{p}) + (\bar{m}no\bar{p}) + (m\bar{n}\bar{o}\bar{p}) + (mn\bar{o}\bar{p}) + (m\bar{n}o\bar{p}) + (mno\bar{p})$$

$$y_r = (\bar{m}\bar{n}\bar{o}p) + (\bar{m}\bar{n}o\bar{p}) + (\bar{m}n\bar{o}p) + (\bar{m}no\bar{p}) + (m\bar{n}\bar{o}p) + (mn\bar{o}\bar{p}) + (m\bar{n}op) + (mno\bar{p})$$

Ec. canónica de maxiterminos

$$y_q = (m+n+o+p)(m+n+o+\bar{p})(m+\bar{n}+o+p)(m+\bar{n}+\bar{o}+p)(\bar{m}+n+o+p)(\bar{m}+n+\bar{o}+p)(\bar{m}+n+o+\bar{p})(\bar{m}+n+\bar{o}+\bar{p})$$

$$y_r = (m+n+o+\bar{p})(m+n+\bar{o}+\bar{p})(m+\bar{n}+o+p)(m+\bar{n}+\bar{o}+p)(\bar{m}+n+o+p)(\bar{m}+n+\bar{o}+p)(\bar{m}+n+o+\bar{p})(\bar{m}+n+\bar{o}+\bar{p})$$

Ec. numérica de miniterminos

$$y_q = \sum_4 (2, 3, 4, 6, 10, 13, 14); \quad y_r = \sum_4 (0, 2, 5, 6, 7, 12, 13, 15)$$

Ec. numérica de maxiterminos

$$y_q = \prod_4 (0, 1, 5, 8, 9, 11, 12, 15); \quad y_r = \prod_4 (1, 3, 4, 8, 9, 10, 11, 14)$$