1. Y=AB´D+AB´D´

Y=AB´(D+D´)

Y=AB´\*1

**Y=AB´**

1. Z=(A´+B)(A+B)

Z=0+A´B+BA+B

Z= A´B+AB+B

Z=B(A´+ A ) + B

Z=B(1) + B

**Z=B**

1. X=ACD+A´BCD

X=CD(A+A´B)

X=CD(A+B)

**X=ACD+BCD**

1. Y=AC´+ABC´

Y=AC´(1+B)

Y=AC´\*1

**Y=AC´**

1. Y=A´B´CD´+A´B´C´D´

Y=A´B´D´(C+C´)

Y=A´B´D´\*1

**Y=A´B´D´**

1. X=(AB´+ C)´

X=(AB´)´ \* C´

X=(A´+ B) C´

**X=A´C´+BC´**

1. Q=[(A´+C)(B+D´)]´

Q=(A´+ C)’ + (B+D´)´

**Q= AC´ + B´D**

1. F=((X+Y)+Z)´

F=X´+Y´+Z´

1. F=((XY)Z)´

F=X´+Y´+Z´

SUMA DE TERMINOS MINIMOS

F1=m1+m4+m7=X´Y´Z+XY´Z´+XYZ=E(1,4,7)

F2=m3+m5+m6+m7=XY´Z´+XY´Z+XYZ´+XYZ=E(3,5,6,7)

PRODUCTO DE TERMINOS MAXIMOS

F1=M0\*M2\*M3\*M5\*M6=(X+Y+Z)(X+Y´+Z)(X+Y´+Z´)(X´+Y+Z´)(X´+Y´+Z)=II(0,2,3,5,6)

F2=M0\*M1\*M2\*M4=(X+Y+Z)(X+Y+Z´)(X+Y´+Z)(X´+Y+Z)=II(0,1,2,4)

Cambio de términos máximos a minimos

F(X,Y,Z)=II(0,2,4,5)=E(1,3,6,7)

|  |  |
| --- | --- |
| mo | m1 |
| m2 | m3 |



F=XY

|  |  |  |
| --- | --- | --- |
| X\Y | 0 | 1 |
| 0 |  | 1 |
| 1 | 1 | 1 |

F=X+Y

|  |  |  |  |
| --- | --- | --- | --- |
| mo | m1 | m2 | m3 |
| m4 | m5 | m6 | m7 |

F=XY´Z+XYZ

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| X\YZ | 00 | 01 | 11 | 10 |
| 0 |  |  |  |  |
| 1 |  | 1 | 1 |  |

F=XZ

F=X´YZ+XY´Z´+X´YZ´+XY´Z=E(2,3,4,5)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| X\YZ | 00 | 01 | 11 | 10 |
| 0 |  |  | 1 | 1 |
| 1 | 1 | 1 |  |  |

F=XY´+X´Y

F=X´Y´Z´+X´YZ´+XY´Z´+XYZ´=E(0,2,4,6)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| X/YZ | 00 | 01 | 11 | 10 |
| 0 | 1 |  |  | 1 |
| 1 | 1 |  |  | 1 |

F=Z´

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| A/BC | 00 | 01 | 11 | 10 |
| 0 |  | 1 | 1 | 1 |
| 1 |  | 1 | 1 |  |

F=C+AB´

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| X/YZ | 00 | 01 | 11 | 10 |
| 0 | 1 |  |  | 1 |
| 1 | 1 | 1 |  | 1 |

F=

F=

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| WX/YZ | 00 | 01 | 11 | 10 |
| 00 | 1 | 1 |  | 1 |
| 01 | 1 | 1 |  | 1 |
| 11 | 1 | 1 |  | 1 |
| 10 | 1 | 1 |  |  |

F(W,X,Y,Z)=Y´+W´Z´+XZ´

F=

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| AB/CD | 00 | 01 | 11 | 10 |
| 00 | 1 | 1 |  |  |
| 01 |  |  |  | 1 |
| 11 |  |  |  |  |
| 10 | 1 | 1 |  |  |

F(A,B,C,D)=B´C´+A´BCD´

F=

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| AB/CDE | 000 | 001 | 011 | 010 | 110 | 111 | 101 | 100 |
| 00 | 1 |  |  | 1 | 1 |  |  | 1 |
| 01 |  | 1 | 1 |  |  | 1 | 1 |  |
| 11 |  | 1 | 1 |  |  | 1 | 1 |  |
| 10 |  | 1 |  |  |  |  | 1 |  |

F=A´B´E´+BE+AD´E

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ABC/DEF | 000 | 001 | 011 | 010 | 110 | 111 | 101 | 100 |
| 000 |  |  |  | 1 |  |  |  |  |
| 001 | 1 |  |  | 1 |  |  |  |  |
| 011 | 1 |  |  | 1 |  |  |  |  |
| 010 |  |  |  | 1 |  |  |  |  |
| 110 |  |  |  | 1 |  |  | 1 |  |
| 111 |  |  |  | 1 |  |  | 1 |  |
| 101 |  |  |  | 1 |  |  | 1 |  |
| 100 |  |  |  | 1 |  |  | 1 |  |

F(A,B,C,D,E,F) = D’EF’+ADE’F+A’CD’F’

Mínimos

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| AB/CD | 00 | 01 | 11 | 10 |
| 00 | 1 | 1 |  | 1 |
| 01 |  | 1 |  |  |
| 11 |  |  |  |  |
| 10 | 1 | 1 |  | 1 |

F(A,B,C,D)=B’D’+B’C’+A’C’D

Maximos

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| AB/CD | 00 | 01 | 11 | 10 |
| 00 |  |  | 0 |  |
| 01 | 0 |  | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 |
| 10 |  |  | 0 |  |

F(A,B,C,D)=(C’+D’)(A’+B’)(B’+D)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| WX/YZ | 00 | 01 | 11 | 10 |
| 00 | X | 1 | 1 | X |
| 01 |  | X | 1 |  |
| 11 |  |  | 1 |  |
| 10 |  |  | 1 |  |

F(W,X,Y,Z)=YZ+W’Z

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| WX/YZ | 00 | 01 | 11 | 10 |
| 00 | X |  |  | X |
| 01 | 0 | X |  | 0 |
| 11 | 0 | 0 |  | 0 |
| 10 | 0 | 0 |  | 0 |

F(W,X,Y,Z)=Z(W’+Y)