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| IFTS 12 | Cálculo Numérico TP N° 3 | Nombre y Apellido: Ariel Mendez    Calificación : |

Hallar los mintérminos de la función algebraicamente y generar su tabla de verdad

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1. Z= (B \* ( A \* C + B \* A )) \* C \* B

Z= (B \* ( A \* C + B \* A )) \* C \* B

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Z= (B + (A C + BA)) \* C \* B

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Z= (B + (A C \* B A))\*C \*B

\_\_ \_\_ \_\_ \_\_ \_\_ \_\_

Z= (B + A C) \* (B + B A)) \*C \* B

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Z = (B + B A + B A C + B A C) \* C \* B

\_\_ \_\_ \_\_ \_\_ \_\_ \_\_

Z = C B(1) + C B A + C B A + C B A

\_\_ \_\_ \_\_ \_\_ \_\_ \_\_ \_\_

Z = C B A + C B A + C B A + C B A

Z = 100 + 101

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| CBA | A C | B A | A C + B A | B(AC + BA) | B(AC + BA) | B(AC + BA)\*C | Z |
| 000 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 001 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| 010 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 011 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 100 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 101 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 110 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 111 | 0 | 1 | 1 | 1 | 0 | 0 | 0 |

1. G= (B \* B \* A) \* (C \* A)

G = (B \* B \* A) + (C \* A)

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G = (B \* B \* A) + (C \* A)

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G = ((B + B)\* A) + (C \* A)

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G = B A (1) + C A (1)

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G = C B A + C B A + C B A + C B A

G= 001 + 101 + 111

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| C B A | B B A | B B A | C A | (BBA)\*(CA) | G |
| 000 | 0 | 1 | 1 | 1 | 0 |
| 001 | 1 | 0 | 1 | 0 | 1 |
| 010 | 0 | 1 | 1 | 1 | 0 |
| 011 | 0 | 1 | 1 | 1 | 0 |
| 100 | 0 | 1 | 1 | 1 | 0 |
| 101 | 1 | 0 | 0 | 0 | 1 |
| 110 | 0 | 1 | 1 | 1 | 0 |
| 111 | 0 | 1 | 0 | 0 | 1 |

1. W= ( A + C ) + ( B + A )

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W = ( A \* C) + ( B \* A)

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W = A C (1) + B A (1)

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W = C B A + C B A + C B A + C B A

W = 100 + 110 + 010

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| C B A | A + C | A + C | B + A | B + A | W |
| 000 | 1 | 0 | 1 | 0 | 0 |
| 001 | 1 | 0 | 1 | 0 | 0 |
| 010 | 1 | 0 | 0 | 1 | 1 |
| 011 | 1 | 0 | 1 | 0 | 0 |
| 100 | 0 | 1 | 1 | 0 | 1 |
| 101 | 1 | 0 | 1 | 0 | 0 |
| 110 | 0 | 1 | 0 | 1 | 1 |
| 111 | 1 | 0 | 1 | 0 | 0 |

1. Z= B C A \* D \* C A \* B C

Z= B C A + D \* C A \* B C

Z= B C A + D + C A \* B C

Z= B C A \* D + C A + B C

Z= B C A \* D + C A + B C

Z=D C B A + C A + B + C

Z= D C B A + C A (1) (1) + B (1) (1) (1) + C (1) (1) (1)

Z = DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA

Z = DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA + DCBA

Z = 0000 + 0001 + 0010 + 0011 + 0101 + 0110 + 0111 + 1000 + 1001 + 1010 + 1011 + 1101 + 1110 + 1111

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| DCBA | BCA | BCA\*D | BCA\*D | CA | B | C | CA\*BC | Z |
| 0000 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 |
| 0001 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 |
| 0010 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 |
| 0011 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| 0100 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 |
| 0101 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 0110 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 |
| 0111 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 1000 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 |
| 1001 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 |
| 1010 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 |
| 1011 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 |
| 1100 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 |
| 1101 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 1110 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 |
| 1111 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |

1. Y= ( A + C B ) \* ( A B + B C )

Y= ( A \* C B) \* ( A B \* B C)

Y= (A \*( C + B)) \* ((A + B) \* (B + C))

Y = ( C B A) \* ( B A + C)

Y= C B A + C B A

Y = 100 + 000

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CBA | C\*B | A+CB | A+CB | AB | BC | AB+BC | AB+BC | Y |
| 000 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| 001 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| 010 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 011 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 100 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| 101 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| 110 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| 111 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |