****INTRODUÇÃO A COMPUTAÇÃO  
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LISTA DE EXERCÍCIOS  
Ano 2025

1. Observe a seguinte tabela verdade e responda com a equação lógica simplificada utilizando o mapa de Karnaugh, para cada uma variável de saída:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ENTRADAS** | | | **SAÍDAS** | | |
| A | B | C | X | Y | Z |
| 0 | 0 | 0 | 1 | 1 | 0 |
| 0 | 0 | 1 | 1 | 1 | 1 |
| 0 | 1 | 0 | 0 | 0 | 0 |
| 0 | 1 | 1 | 1 | 1 | 0 |
| 1 | 0 | 0 | 0 | 1 | 0 |
| 1 | 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 0 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 | 0 | 1 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | B'C'  00 | B'C  01 | BC  11 | BC'  10 |
| A'=0 |  |  |  |  |
| A=1 |  |  |  |  |

1. Baseado nos mapas de Karnaugh a seguir, responda qual a equação lógica simplificada de cada item:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| AB/CD | 00 | 01 | 11 | 10 |
| 00 | 1 | 0 | 1 | 1 |
| 01 | 1 | 1 | 1 | 1 |
| 11 | 0 | 1 | 0 | 1 |
| 10 | 0 | 1 | 1 | 0 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| AB/CD | 00 | 01 | 11 | 10 |
| 00 | 1 | 1 | 0 | 0 |
| 01 | 1 | 1 | 0 | 0 |
| 11 | 0 | 0 | 1 | 1 |
| 10 | 0 | 0 | 1 | 1 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| AB/CD | 00 | 01 | 11 | 10 |
| 00 | 1 | 0 | 0 | 1 |
| 01 | 1 | 0 | 0 | 1 |
| 11 | 1 | 1 | 1 | 1 |
| 10 | 0 | 0 | 0 | 0 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| AB/CD | 00 | 01 | 11 | 10 |
| 00 | 1 | 1 | 0 | 0 |
| 01 | 0 | 0 | 1 | 1 |
| 11 | 0 | 0 | 1 | 1 |
| 10 | 1 | 1 | 0 | 0 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| AB/CD | 00 | 01 | 11 | 10 |
| 00 | 1 | 1 | 1 | 0 |
| 01 | 1 | 0 | 1 | 0 |
| 11 | 1 | 1 | 0 | 0 |
| 10 | 0 | 0 | 1 | 1 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| AB/CD | 00 | 01 | 11 | 10 |
| 00 | 1 | 1 | 1 | 1 |
| 01 | 1 | 0 | 0 | 0 |
| 11 | 1 | 0 | 0 | 1 |
| 10 | 1 | 1 | 0 | 0 |