**Comprovação das propriedades: Identidades auxiliares.**

|  |  |  |
| --- | --- | --- |
| **I****dentidades auxiliares** | ***15*** | A+A.B=A |
| ***16*** | $$A+\overline{A}.B=A+B$$ |
| ***17*** | (A+B).(A+C)=A+B.C |

**Identidades auxiliares 15** A+A.B=A

a) Preenche as tabelas de verdade

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| **15** A+A.B=A |
| 22=4 | Entradas |  |
| **A** | **B** | **A+B** | **A+A.B** |
| 0 | 0 | 0 |  |  |
| 1 | 0 | 1 |  |  |
| 2 | 1 | 0 |  |  |
| 3 | 1 | 1 |  |  |

 |  |  |

**Identidades auxiliares 16** $A+\overline{A}.B=A+B$

1. Preenche as tabelas de verdade

|  |  |  |
| --- | --- | --- |
| **16** $A+\overline{A}.B=A+B$ |  |  |
| 23=8 | Entradas |  |  |  |  |
| **A** | **B** | $$\overline{A}$$ | $$\overline{A}.B$$ | $$A+\overline{A}.B$$ |  | $$A+B$$ |
| 0 | 0 | 0 |  |  |  |  |  |
| 1 | 0 | 1 |  |  |  |  |  |
| 2 | 1 | 0 |  |  |  |  |  |
| 3 | 1 | 1 |  |  |  |  |  |
| 4 | 0 | 0 |  |  |  |  |  |
| 5 | 0 | 1 |  |  |  |  |  |
| 6 | 1 | 0 |  |  |  |  |  |
| 7 | 1 | 1 |  |  |  |  |  |

b) Desenha e testa os circuitos no logisim.

**Identidades auxiliares 17 (A+B).(A+C)=A+B.C**

1. Preenche as tabelas de verdade

|  |  |  |
| --- | --- | --- |
| **17 (A+B).(A+C)=A+B.C** |  | **A+B.C** |
| 23=8 | Entradas |  |  |  |
| **A** | **B** | **A+B** | **A+C** | **(A+B).(A+C)** |  | **B.C** | **A+B.C** |
| 0 | 0 | 0 |  |  |  |  |  |  |
| 1 | 0 | 1 |  |  |  |  |  |  |
| 2 | 1 | 0 |  |  |  |  |  |  |
| 3 | 1 | 1 |  |  |  |  |  |  |
| 4 | 0 | 0 |  |  |  |  |  |  |
| 5 | 0 | 1 |  |  |  |  |  |  |
| 6 | 1 | 0 |  |  |  |  |  |  |
| 7 | 1 | 1 |  |  |  |  |  |  |

b) Desenha e testa os circuitos no logisim.