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**TALLER #2**

**1.** Verificar si para S = [false, true] ,

(S, ∨, ∧, ¬, false, true) es un álgebra booleana (lógica proposicional).

1. Leyes asociativas:

(Primera)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| V | V | V | V | V |
| V | V | F | V | V |
| V | F | V | V | V |
| V | F | F | V | V |
| F | V | V | V | V |
| F | V | F | V | V |
| F | F | V | V | V |
| F | F | F | F | F |

(Segunda)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| V | V | V | V | V |
| V | V | F | F | F |
| V | F | V | F | F |
| V | F | F | F | F |
| F | V | V | F | F |
| F | V | F | F | F |
| F | F | V | F | F |
| F | F | F | F | F |

1. Leyes conmutativas:

(Primera)

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| V | V | V | V |
| V | V | V | V |
| V | F | V | V |
| V | F | V | V |
| F | V | V | V |
| F | V | V | V |
| F | F | F | V |
| F | F | F | V |

(Segunda)

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| V | V | V | V |
| V | V | V | V |
| V | F | F | F |
| V | F | F | F |
| F | V | F | F |
| F | V | F | F |
| F | F | F | F |
| F | F | F | F |

1. Leyes distributivas:

(Primera)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| V | V | V | V | V |
| V | V | F | V | V |
| V | F | V | V | V |
| V | F | F | F | F |
| F | V | V | F | F |
| F | V | F | F | F |
| F | F | V | F | F |
| F | F | F | F | F |

(Segunda)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| V | V | V | V | V |
| V | V | F | V | V |
| V | F | V | V | V |
| V | F | F | V | V |
| F | V | V | F | V |
| F | V | F | F | F |
| F | F | V | F | F |
| F | F | F | F | F |

1. Leyes de identidad:

(Primera)

|  |  |
| --- | --- |
|  |  |
| V | V |
| F | F |

(Segunda)

|  |  |
| --- | --- |
|  |  |
| V | V |
| F | F |

1. Leyes de complementos:

(Primera)

|  |  |
| --- | --- |
|  |  |
| V | V |
| F | F |

(Segunda)

|  |  |
| --- | --- |
|  |  |
| V | V |
| F | F |

Conjunción (and)

|  |  |  |
| --- | --- | --- |
|  |  |  |
| V | V | V |
| V | F | F |
| F | V | F |
| F | F | F |

Disyunción (or)

|  |  |  |
| --- | --- | --- |
|  |  |  |
| V | V | V |
| V | F | V |
| F | V | V |
| F | F | F |

Negación (not)

|  |  |
| --- | --- |
|  |  |
| V | F |
| F | V |