PROPIETATS ALGEBRA DE BOOLE

COMMUTATIVA

- A **OR** B **=** B **OR** A
- A **AND** B **=** B **AND** A

ASSOCIATIVA:

- A **OR** (B **OR** C) **=** (A **OR** B) **OR** C **=** A **OR** B **OR** C
- A **AND** (B **AND** C) **=** (A **AND** B) **AND** C **=** A **AND** B **AND** C

DISTRIBUTIVA:

- A **AND** (B **OR** C) **=** (A **AND** B) **OR** (A **AND** C)
- A **OR** (B **AND** C) **=** (A **OR** B) **AND** (A **OR** C)

ELEMENT NEUTRE:

- A **OR** 0 **=** 0 **OR** A **=** A
- 1 **AND** A **=** A **AND** 1 **=** A

COMPLEMENTARI:

- A **OR NOT** A **=** **NOT** A **OR** A **=** 1
- A **AND NOT** A **=** **NOT** A **AND** A **=** 0

- **NOT** 1 **=** 0
- **NOT** 0 **=** 1

INVOLUCIÓ

- **NOT** (**NOT** A) **=** A

IDEMPOTÈNCIA:

- A **OR** A **=** A
- A **AND** A **=** A

ACOTACIÓ:

- A **OR** 1 **=** 1
- A **AND** 0 **=** 0

ABSORCIÓ:

- A **OR** (A **AND** B) **=** A
- A **AND** (A **OR** B) **=** A

A	B	A AND B	A OR B	A OR (A AND B)	A AND (A OR B)
0	0	0	0	0	0
0	1	0	1	0	0
1	0	0	1	1	1
1	1	1	1	1	1

Lleis de Morgan

1. **NOT (A OR B) = NOT A AND NOT B**

A	B	NOT A	NOT B	A OR B	NOT(A OR B)	NOT A AND NOT B
0	0	1	1	0	1	1
0	1	1	0	1	0	0
1	0	0	1	1	0	0
1	1	0	0	1	0	0

2. **NOT (A AND B) = NOT A OR NOT B**

A	B	NOT A	NOT B	A AND B	NOT(A AND B)	NOT A OR NOT B
0	0	1	1	0	1	1
0	1	1	0	0	1	1
1	0	0	1	0	1	1
1	1	0	0	1	0	0