L-15

Acomplement

U -> universal set

- intersection

\* Boolean laws

Commutative bw

(1)

Logic a vb = bva

set aub = b ava

theory and sbra

for a tradition Boolean a+b = b+a

Algebra a.b. 6.9

Boolean Algebra Logic for AND Set theory

2) Associative law

Logic = av(bvc) = (avb)vc an(bnc) = (anb) nc

settheory = au(buc) = (aub)uc an(bnc) = (anb)nc

-Boblean , a+(b+c) = (a+b)+c Algebra q. (b.c) = (a.b).c

√The Good Pape

3 Distributive law

Logic - an(bvc) = (anb) v (anc) av(bnc) = (avb) v (avb)

sat theory = an(buc) = (anb) v (anc)
av (bnc) = (avb) n (aub)

Boolean (a.(b+c) = a.b + a.c.

Algebra (a+b.c) = (a+b). (a+c)

+ is distributive over +

. is distributive over +

4) Identity bus

a VF = a

Set anz = 9 theory av \$ = 9

Boolean a.1.2a
Algebra a+0=a

9

+ 0 + 0 - (0+9) +0 - condition

ALLAND COADIAD

Complement law

Logic a V 7a = T

a N 7a = F

set theory ava= pr

Boolean a+a=1
Algebra 10.a=0

Idempotent law

Logic a va = a

set avasa
theory anasa

Boolean ataza Algebra a.a.za

desuble complement

Logic > (>a) > a

set (qc) = a Theory

√The Good Paper

Boolean A = a

Algebra

Demorgan's law 9 bodeam attic Logic farbre...). >arbro-Algebra a.b.c an set = (aubuc-5 = a < n b p c = -Trick to zember remember => change the sign break the a+b (2) a.b (8) Domination law logic boolean aVT a+1 21 Algebra 9.000 Set 900 = 0 theory and = Ø pedista 9 Absorbtion law Beo ken