46 (d) (AUB) = A AB / demortrarem la deble inclusió.

XEAC => X &A X&A => XEAC Noah Margue & Vara Grup tF 9412/2020

ler (AUB) CACABC

Signi XE (AUB) C=> X & AUB L=> X & A N X & B C=> XEAC NXEBC=> XE ACDBC Zni A'NB' C (AUB)'

Signi X E ACABCL => X EACA X EBC=> X &A AX &B C=> X & AUB => X & (AUB)C

(e) (ANB) = A UBC

1er: (ANB) C ACUBC

Signi XE(ANB) => X & ANB (=> X & A V X & B (=> X & A C V X & B C (=) X & A C UBC

Zn: ACUBC C (ANB)C

Signi XE ACUBC => XEACV XEBC (=> X &A V X &B (=> X & A NB (=>) (=) X & ANB (=) XE (ANB) C

50

(g) {2,5} & P (X) (=> {2,5} (=> 2 & X => 2 & X 1 5 & X . Fals

(h) {2,5} ⊆ P(x) <=> 2,5 € P(x) <=> Z⊆X 15 ⊆ X. Fali

(i) $\{\emptyset\} \subseteq P(X) \longrightarrow \emptyset \in X \text{ sempre ext.}$ cort & X (conjunt)

(j) {Ø} ε P(x) (=> {Ø} ⊆ X (=> Ø ε × cont.

52.

XEP(X) => X SX

(a) P(XUY) = P(X)UP(Y) Falia

Signi X = {1,2,3}, P(x) = {0, {13, {23, {33, {1,23, {1,33, {2,33, {1,2,33}}}}.

SigniY = { 4.5}, P(4)={\$\phi\$, \$4}, \$5}, \$\psi_{4.5}\$}

XUY = {1,2,3,4,5}

P(XUY) = {0, 113, 123, {3}, {4}, 153, 61, 23, {1,33, 11,43, 11,51, 12,33, 12,43, 42,53, 13, 43, 13,53, 44.53 , 51,2,34, 41,2,43 ,41,2,54, 12,3,4) (12,3,54 , 13,4,54 , 11,2,3,4,51).

P(XUY) & P(X)UP(Y).

(b) P(XUY) = P(X) V P(Y). Got

Signi x EP(X) UP(Y) => X EP(X) V X EP(Y) (=> X E X V X E Y => X E X U.Y G

L=> XEP(XUY)

(c) P(x) Y) = P(x) \ P(y) Got.

XEP(XY) => X = XY (=> X = X n x & Y => XEP(X) n x & P(Y) =>

(=) XEP(X) \ P(Y)

(d) P (x/y) = P(x) \ P(y). Fals.

Signi x = {1,2} X\Y = {1}.

Signi 4= {2,3}

P(x) = 40, 417, 424, 41,244

P(Y) = 10, 121, 139, 192,334

P(X/Y) = 10, 1119.

 $P(X|Y) \ge P(X) \setminus P(Y)$.