Probas-Stats Sétie 02

[Ext]

(a) Soit 2 ladasse, 121=67, 1F1=47 (FR), 101=35 (DE)

1 FN 01=23

[-21 (FUD)]=7

$$|D|(FOD)| = |D| - |FUD| = |D| - |FIFID| - |FND||$$

$$= 67 - (47 + 35 - 23)$$

$$= 8$$
(b) $|D| = 67$, $|F| = 47$, $|D| = 35$, $|R| = 20$, $|FDD| = 23$

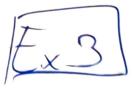
[I] (RUFUA) | Soit |Ailisz = IF, D, RI (dans cetordre)

on a $|\Omega| |Qhi| = |\Omega| |Qhi|$ $|Qhi| = |A_1| + |A_2| + |A_3| + |A_4| + |A_5| +$

ROFI=12, IRADI=11, IRADAFI=5

Danc emobtient 67-61=16]

P(AIB) = P(BIA) P(A)
P(B) Vidence/marginal, Zalian A:= "loin mais pas trop" P(A) = 1/4B:= "Proche" P(B) = 1/2C:= "tres loin" P(C) = 1/4R:= "Retrower le terroriste" P(RIB) = 0.9, P(RIC) = 0.5, P(RIA) = 1 P(A) R) = ? P(B) = ? P(R) = ? On Sait que + A,B P(AnB) = D(B(A) P(A) = P(A) D) P(B) P(A) R = P(R A) . P(A) = 1-14 = 114 [P(B)] = P(R)B) . P(B) = 09. = 045 P(RC) = 1-P(R) = 1- IPR 1 Am/ = 1- (P(RNA)+P(RNB)+ P(RIC). PCO) Danc P(R9=1-(1+045+0.5.4)



On charche max (In: P(En) < p]) P(E1):= D (del de Die deathrate) an a: p=0.03 (a) $\rho = 0.5$ On Sait que P(Em) < m. P(E1) = m. N Or mp m < p = 0.5 = 50 16.62 On a some gue mest au moins 17 P(Em) = 1-P(n) Si) OG Si = la 1-ème personne sarut (NB: P(S)) = 1-1) = 1- (1- p) M (les si sont mutuellements indépendents) $1-(1-\mu)^m \leq \rho \iff (1-\mu)^m \leq 1-\rho$ M log (1-p) ≤ log (1-p)

 $\begin{array}{ll}
& \leq & \leq & \leq & \leq & \leq \\
\hline
& \log(1-P) \\
\hline
& \leq & \leq & \leq \\
\hline
& \log(1-P) \\
\hline
& \leq & \leq & \leq \\
\hline
& \leq & \leq \\
\hline
& \leq & \leq & \leq \\
\hline
& \leq & \\
\hline
& \leq & \leq \\$