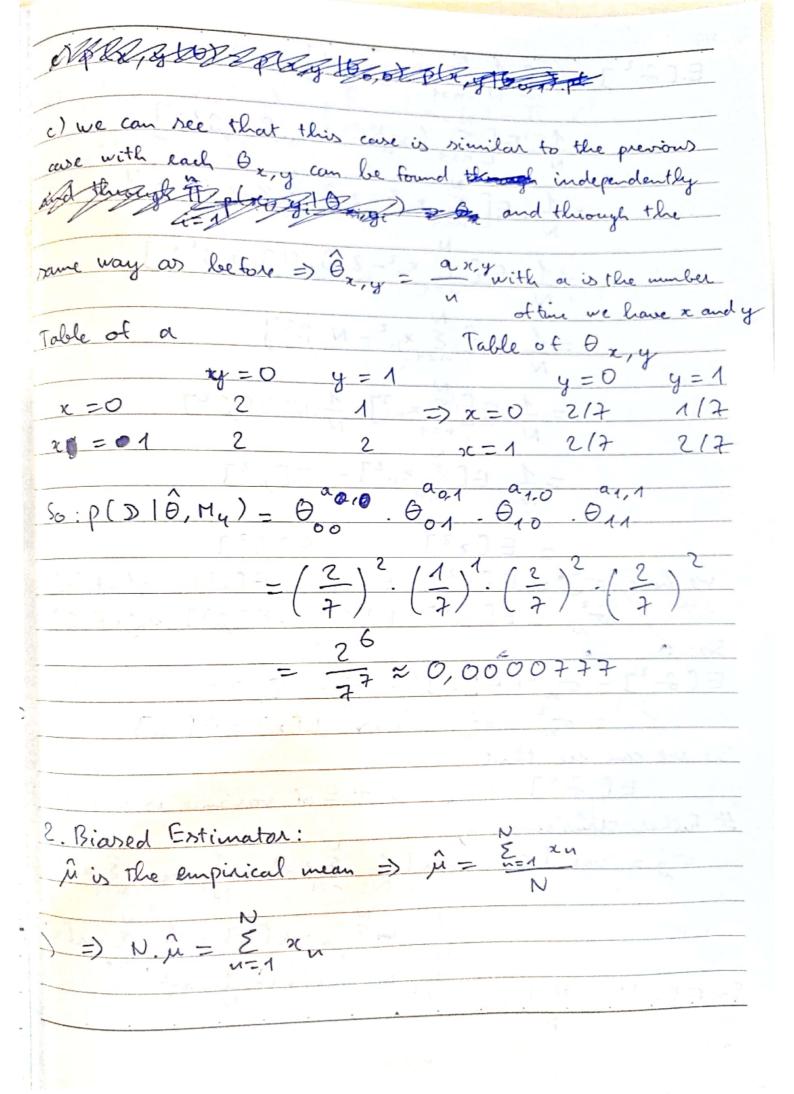
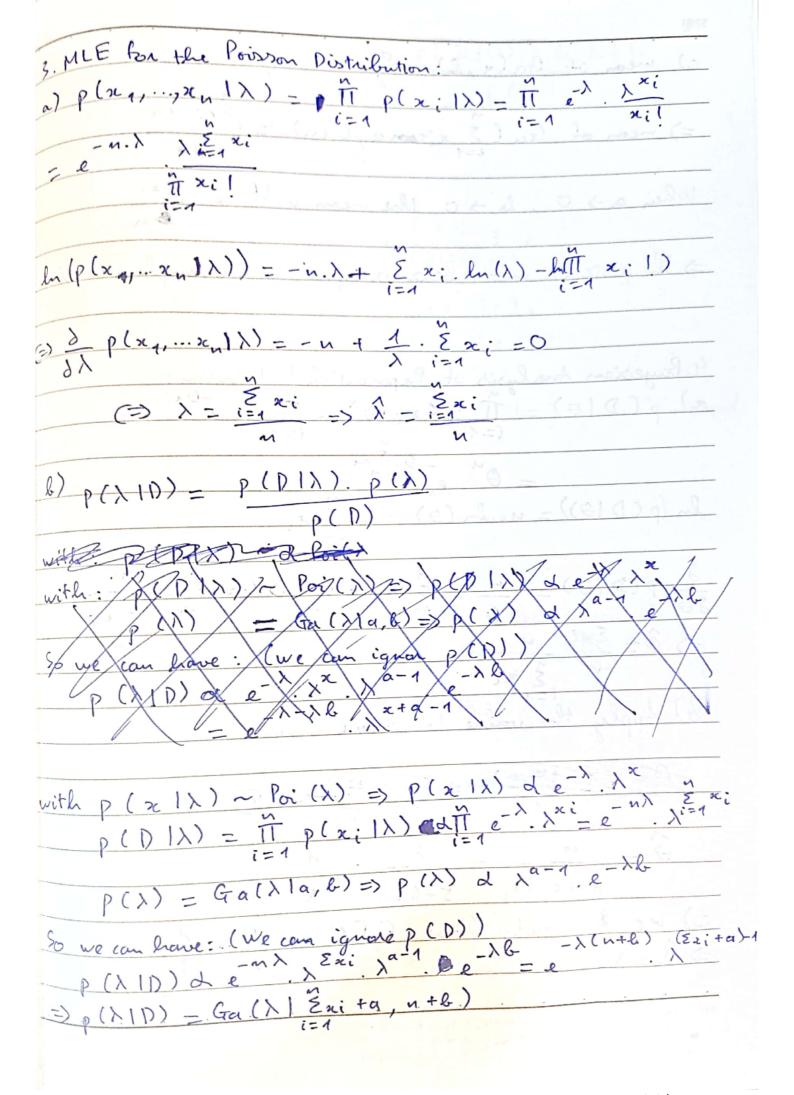


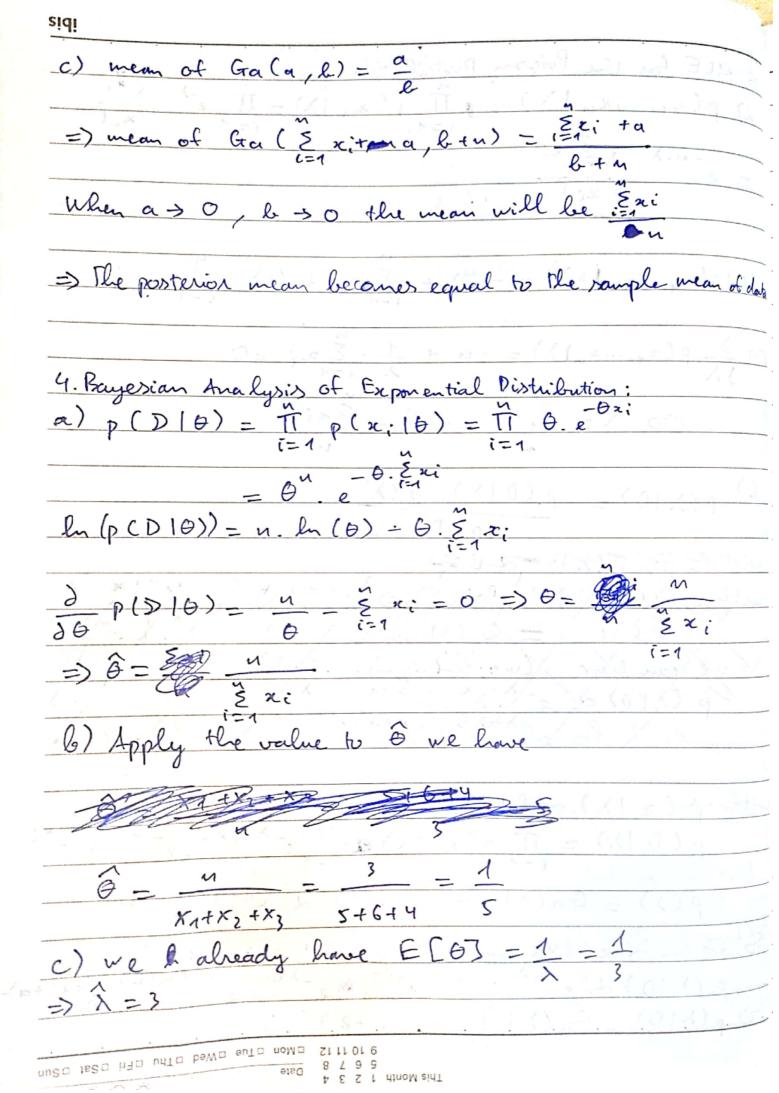
Also:	at a state of the
The olustical x	i) = $\theta_2^{D}$ . (1- $\theta_1$ ) with s is ub of times $x = y$ d is ub of times $x \neq y$ .
i=1	dis ub of times x # y
	D+d=n is total of
Because it the san	me like the previous one
so we have	- A CIL A - KI C
d 0(x u 18:	$=\frac{3}{2}-\frac{d}{d}=0$
36,	$\frac{\partial}{\partial z} = \frac{\partial}{\partial z} = \frac{\partial}$
(-) A -	D = A - D (7) = 9
	n 2 n
liest:	(01) - (01) - (01)
Next:	= 0 h. (1-61) t. 62" (1-02)
P(D 10, M2)	= 01. (1-01).02. (1-01)
	, 4 , 3 , 4 , 3
	$=\frac{4^{4}\cdot 3^{3}\cdot 4^{4}\cdot 3^{3}}{7}$
The state of the s	
- 1 2/5)0	$=\frac{48}{7}\cdot\frac{3}{7}\cdot\frac{3}{7}\cdot\frac{6}{7}=\frac{48\cdot36}{2000000000000000000000000000000000000$
alamala la Lacada A	7 7 7 714
(2) p(x 4 (6)	= 2 (x y) B = No(x y   A)
11/19	16,1
· / / /	n(x=y=0) n(x=0,y=1) n(x=1,y=0) n(x=
10/1	0,0
> log (pxy 16)	)= no. log (00,0) + no, 1. log (00,1)
	+ u, o log (0,0) + u, 1 . ly (0,1)
we can see that	tre con also find of a . 6 00 6
inderendently	0,070,0
X 9/ / 9X	
86	



 $E(\hat{\sigma}^2) = E\left[\frac{1}{N} \cdot \sum_{n=1}^{N} (x_n - \hat{\mu})^2\right]$ =  $\frac{1}{N} \cdot E \left[ \sum_{n=1}^{N} \left( x_n^2 - 2x_n \cdot \hat{\mu} + \hat{\mu}^2 \right) \right]$  $= 1 \cdot E \left[ \sum_{n=1}^{N} x_n^2 - 2 \cdot \hat{\mu} \cdot \sum_{n=1}^{N} x_n + \sum_{n=1}^{N} \hat{\mu} \right]$  $= 1 \cdot E\left[\sum_{n=1}^{N} x_{n}^{2} - 2 \cdot \hat{\mu} \cdot N \cdot \hat{\mu} + \hat{\mu}^{2} \cdot N\right]$ = 1. E[ E x 2 - N. 22]  $= \frac{1}{2} \cdot E\left[\frac{E \times u^2}{V} - \frac{1}{2} \cdot N \cdot E[u^2]\right]$ -1 E[ 2 x n2] - E[ 2] E[22] - E[m2] ve have on = E[2] - E[2] - E[2] = 5,2+ E[2] ση = E[μ²]- E[μβ² = ση' + E(μ)' E[2] = 52+ E[x]2 - 52 - E[2]2 = 52 - 52 cause E[x] = E[û] E[62] + 50 => MLE of variance is biased # Futher transformer ση = var [û] = var [1 . ξ xn] = 1 . var [ξ xn] = 1 . - E var[x] = 1. E var[x] So  $E[\hat{G}^2] = \frac{N-1}{N} \cdot \frac{2}{8} \times \frac{N^2 \cdot N \cdot var[x] = \frac{1}{N} \cdot \frac{2}{8}}{N^2 \cdot N \cdot var[x]} = \frac{1}{N} \cdot \frac{2}{8}$ Jean ATU Wed DAND BUT NOME This Month 1 2

Được quét bằng CamScanner





1) we have p(OID, 1=3) - P( DIO).p(0) \=3) P(D) we can ignore p (D) and bon. PCD10) = 6". e-0. Exi  $P(\theta) \hat{s} = 3 - 3 e^{-3\theta}$  $(01), \hat{\lambda} = 3) \times 0^{n} = 0.5x_{i}.3.e$ => p(01), \( = 3 \) ~ Ga(0 | n+1, 3+ Ex; ) = Ga(0|3+1,3+15)Ga (014,18) e) No, the exponential prior conjugate to gamma libelihood 6. Off set Term for linear legression: E[y|x] = wo + wT.x So we have likelihood function in linear regression.

L(y|x, wo, w, o<sup>2</sup>) = TTp(y; 1x; , wo, v, o<sup>2</sup>) => le (y 1 x, wo, w, 5 2) = log ( IT 1 = - 1 . log (27002) - 1 . E(y: - E[y[x]) = -m. log (27.52) - 1 \( \subseteq (\quad \varphi \cdot \varphi \) - \( \subseteq \subseteq \varphi \) \( \subseteq \subseteq \subseteq \subseteq \subseteq \varphi \) \( \subseteq To calculate MLE of w.

