Extruse 5.	$log Pr(X) = log \frac{1}{2} \frac{1}{\sqrt{270}} 1$
,	= log(1/2 JZ10 Exp(-202 (x-1/2)) - log (5/2) The tzno expt202 (x-1/2))
	= - 202 (x-11x)+ log/1x)+ log/270) - log/ \(\frac{1}{270} \sum_{1/2} \tau_1 \tau_2 \tau_2 \tau_1 \tau_1 \ta
	$= -\frac{1}{20^{2}} + x^{2} - 2 \times M \times + M \times^{2} + \log(71 \times) + \log(\frac{1}{200}) + \log(\frac{1}{2$
	Assumption: NIUK, O) distribution.
	After taking the log of Prix), we get the above 1854/15. Since the two parts - 202 and log (\$\frac{\x}{2} = 712 exp \frac{\z}{2} (\times + 1012)) Keep constant, guly the middle part \times \frac{\lambda \x}{\sigma} - \frac{\lambda \x}{2} + \log (\lambda \x) left. So When Pxix is largest, \times \frac{\lambda \x}{\sigma^2} - \frac{\lambda \x}{2\sigma^2} + \log (\lambda \x) is largest.
•	Keep constant, puly the middle part x 1/2 - 1/2 + log(n+) left.
	>0 When PXIX is largest, X 02 - 202 + log 174) is largest.

		12 26 10	8			
Exercise 6.	a). Ti. probabil	ity that a wo	man develops an	infection af	er aboranihal	
AND SA	delivery. =	> 71 = P(Infecti	on = Yes antibiotic	(5)		
	Liken'hood:	Plinfeition =	Yes antibiotics	= Y(6) = 1	<u>+1</u> +11+2+17+1	
			大学 大学	V A		
	The likely-and	Plinfedion=	Yes antibotics = 1	Jo) = 23+ 8	+28 +3+30 +8+28	
			Lythe of mynths		3 If the followide Albert III H.	
Esse 4.0 (4)	11 Workingth With	THE S. I have a	Q of a section A	gunta est aut		
	b),	Co-thin ent	odds Ratio = expl	wettigient)	p-vame	
		-08207	0×440		0.0971	
	antibiotics	-3,2544	0.0386		1.37 e-11	
,	Plan	-1.0720	0.3423		0.0117	
	risk	2,0299	7.6133.		8250-06	
	Give the 95% of for the odds ratio, antibiotics, plan and risk.					
	with p-value < 0.05 are significant associated with infection					
	· Antibiotics: Mothers dose antibiotics have 0.0386 times the odds of					
			not does antib			
	· Plan: Mothers	plan abdomi	nal delivery has	ve 03423 tiv	nes the odds	
	of infection than those do not plan abdominal delivery, controlling other variables. Risk: Mothers have a risk factor have 7.6133 times the oclose of					
	Metron than those do not have a risk factor, controlling					
	other variables in the model.					
	Parinte	log-odds = -	08207 -3, 2544. anth	nioti/5 + 2,029; +	15k - 1,0720 Plan	
	0. rix=1, pl	an=1, anitibil	otics = .			
				-3,1172.		
Prlinfect	ion=)= e 311+2	-= 0.0424.	+ 2.0299 - 1.0720 = Probability of ar	infection		

d). From the	wetticions of LDA.	"antibiotics"	has the strongest	JYX
			infection, Y=1: infecti	
P() Y=1 m)			langer a serie	
niven the L	17.0 = 0.7 put, To= 0.71	17 , 1,= 0126	/1.	
With Fisk=1 Play=1, antibiotius=1, fo IX = Pl	X=x (Y=0) = 9+3+87	+ 32730 + 2+17 -	20944	
1, [f. (x) = b(x	(=x Y=1) = -23+ 11+	1 8+28+1 = 0	0141	
			t the probability of	
a woman				
			10	
1000	lo ix 4 x je		Notable	
	0/3/20×D	4131,6-	2019 MAD	
*40.61 ·	1343	0.5F0.71=	· walst +	~
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