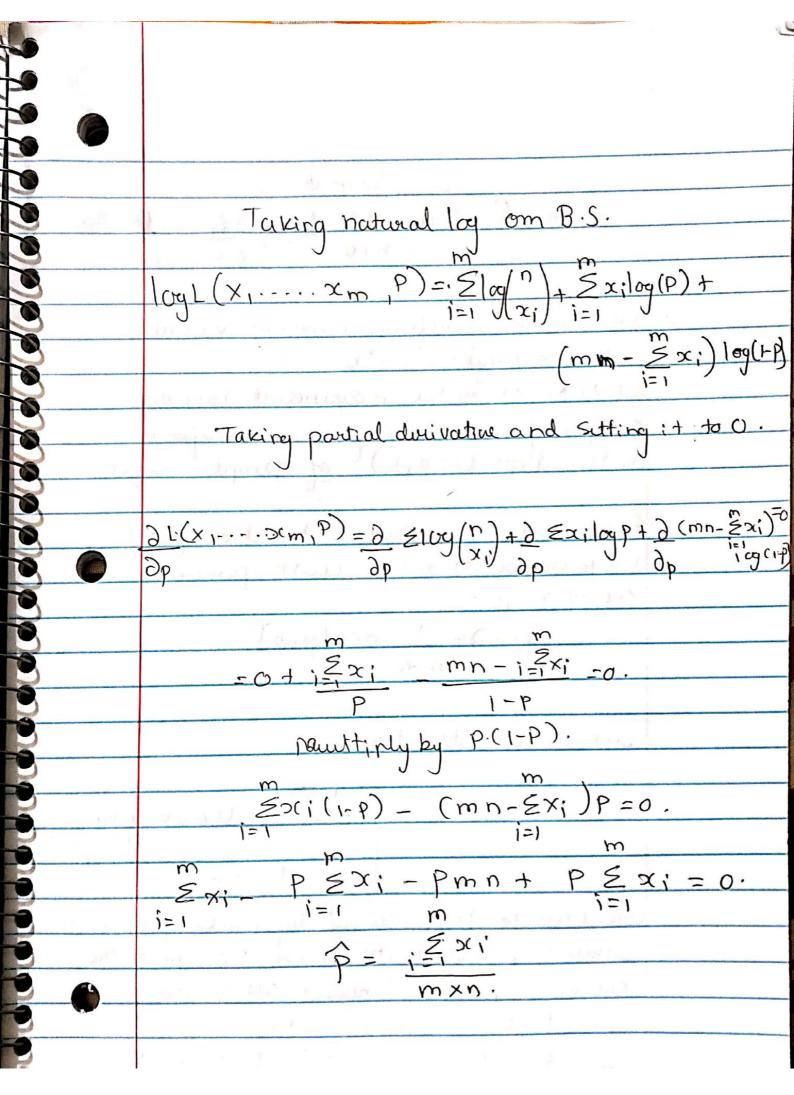
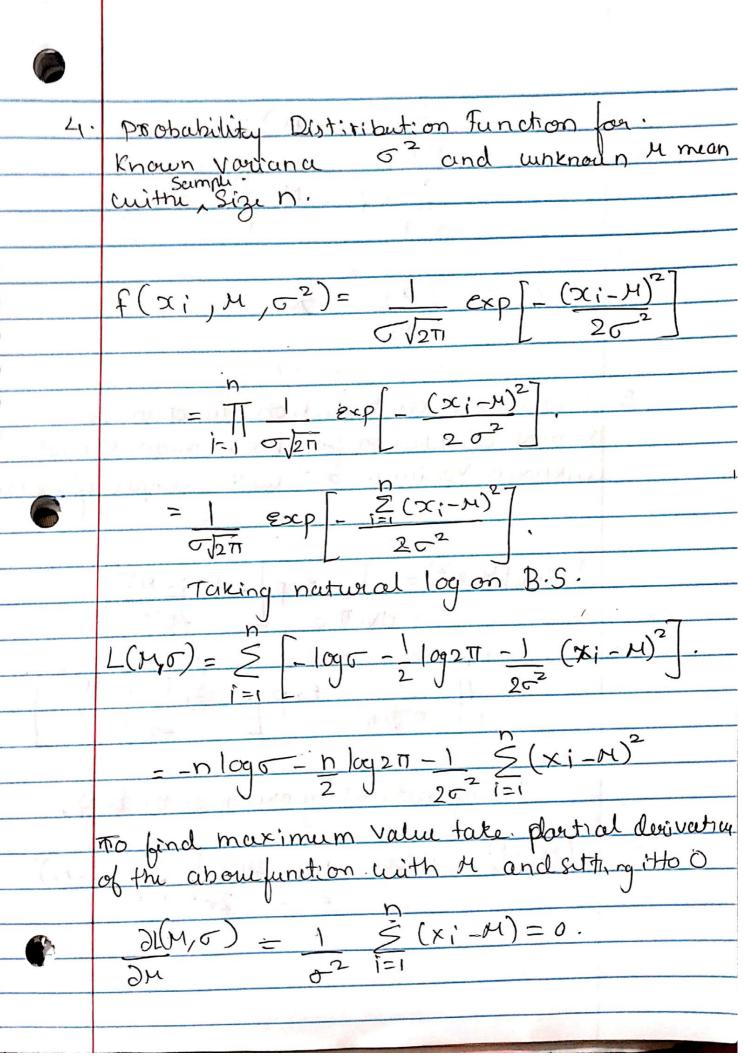


taking partial derivative = d Exilogp + 3 (n-Exi)log(1-P) Multiplying by P(I-P). Ex; (1-p) - (n-Exi)p=0. Exi - hp = 0. Probability Density Function with parameter P. $f(x) = {n \choose x} p^{x} (i-p)^{n-x} \quad \text{when } x=0,\dots,n$! the likelihood function of the Sample is. $f(x_1, \dots, x_m, P) = TT f(x_i, P)$ (xi are independent) $\frac{1}{n} \left(\frac{x!}{n} \right) p^{oci} \left(1 - p \right) n - x i$



using Jos males Problem **0**+2333 3. Let x be the uniform random Variable with parameter a and b. det x, xe. - xn be the independent randato Sample of x drawn from a uniform distribution U(a1b) of Sample sizen Probability distition function for. uniform distribution with parameter a and b is . $\int_{a}^{b-a} (x) = \int_{a}^{b} on \left[a, b\right].$ likelihood Function f(x,...xn,a,b)= \(\frac{1}{b-a}\)'if all x are in the interval [916] C. otherwise. This can be maximized by making b-a as. small as possible with oustriction that the. interval [a,b] must include all the dater. . MLE for pair (a,b)is. a=min (x, --- xn), b= max (x, --- xn)

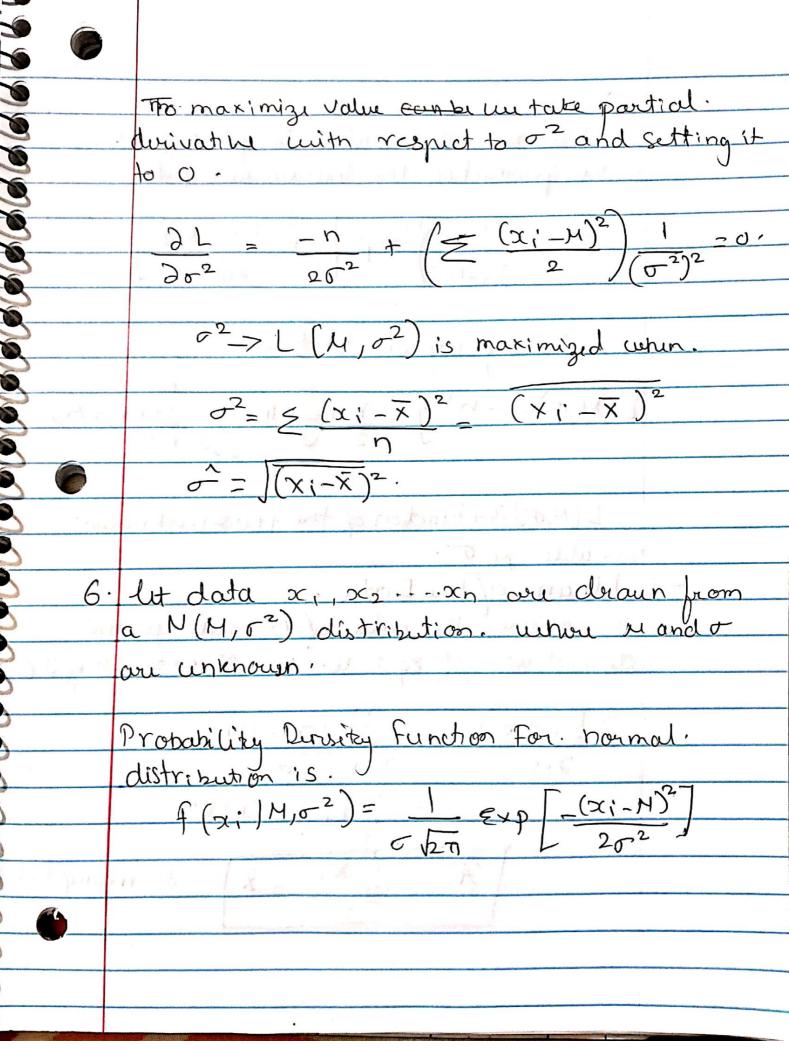


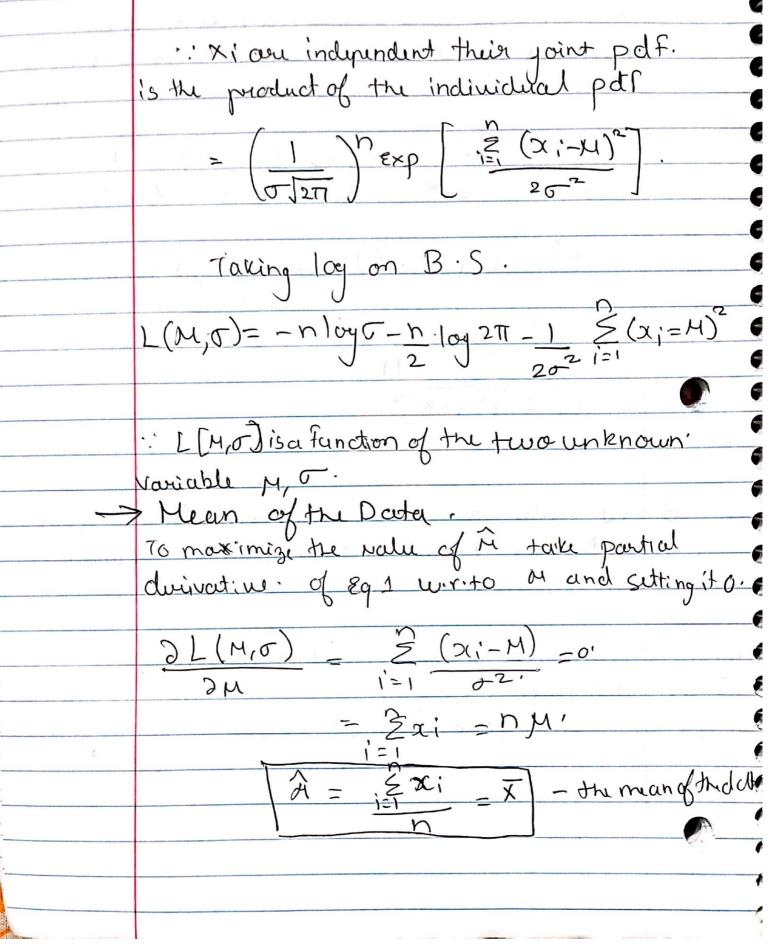
$$= \sum_{i=1}^{\infty} (x_i - M) = 0.$$

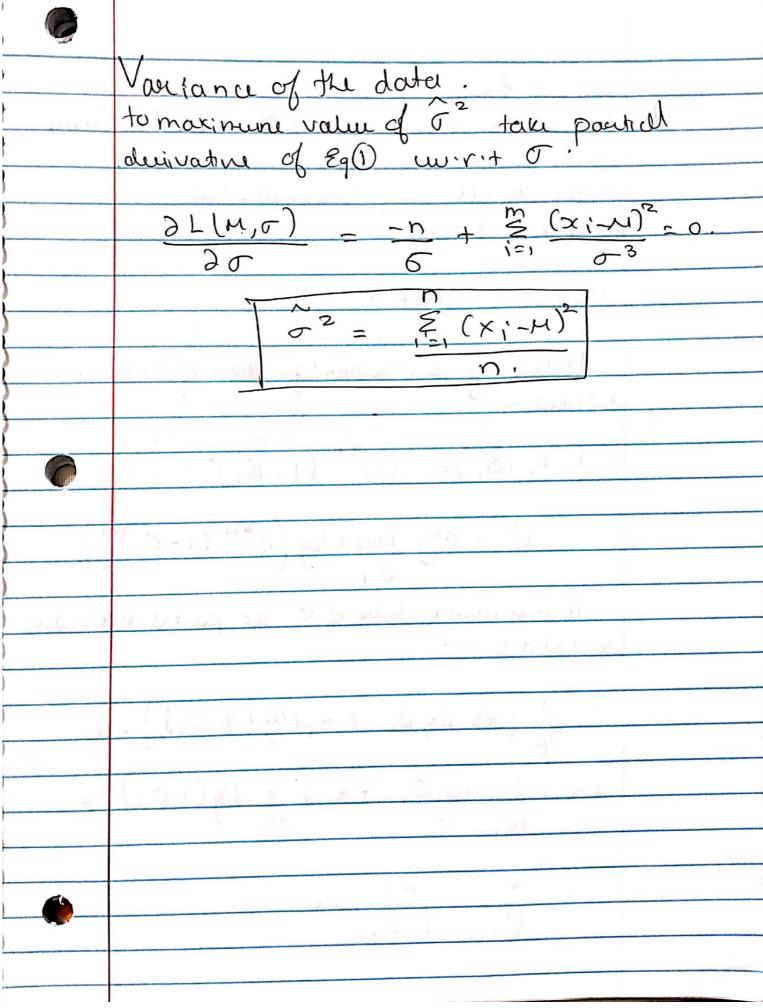
$$= \sum_{i=1}^{\infty} x_i - M \sum_{i=1}^{\infty} = 0.$$

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$$= \sum_{i=1}^{\infty} x_i - M \sum_{i=1}^{$$







(oin and thurst 1. MLE for the thumbtack and coin will be same. No of trails = 40 } Total = 100 tray. tossing a thumtack. Probability distribution function of Binomial P(D, 10,) = 0, dn (1-0,) dt. 0, = org maxxlog (0 xH (1-0,)xt). To maximume. Value of o do portal decivative and stit to o. = 2 [2n log 0, + 2, log (1-0,)] = 0. = < 4) log 0, + x +) log (1-0,)=0. - QH, QT -0.

(1-01) dH - G/dT =0. XH-01XN-0,XT=0 dH-O,(dH+dT)=0 On = WH WHFdT $Q_{H} = 60$ $Q_{T} = 40$ $Q_{1} = 60 = 60 = 3 = 0.6.$ 60 + 90 = 100. MLE for the coin and thumbtack will be