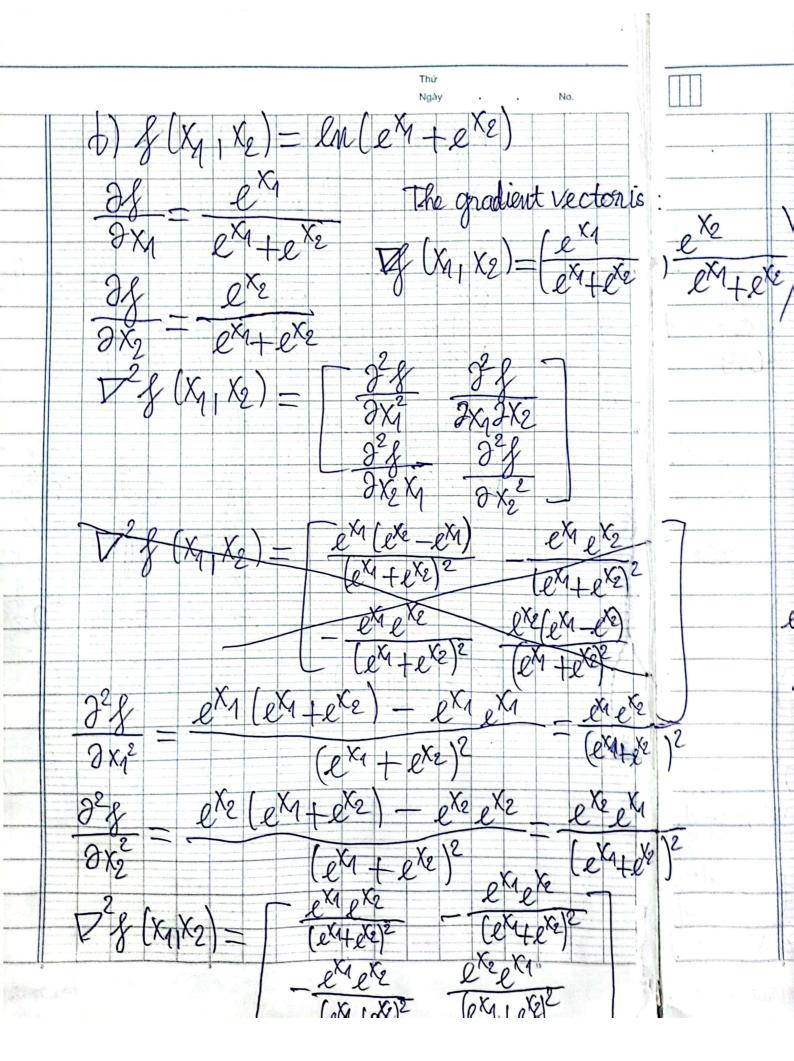
No. Ngày Ngô Là Thiên Ân. Using Hessian matrix KOKUYD





Thứ Ngày (-2) x (-2)= 16 74-0 scriminant is eigenvalues are real and positive, which means that the Hessian matrix is positive As a result, of the function

Principal areal You run is

KOKUYD

Iteration 1: -0.1 (2x0 - 9 - 2x0) = 0.9-0.1 (11 + 8x0 - 2x0) = -1. $= 0.9 - 0.1 (2 \times 0.9 - 9 - 2 \times 0.9) = 1.4$ $= -1.1 - 0.1 (8 \times (-1.1) - 2 \times (-0.9) + 11) = -1.14$ $= 1.4 - 0.1(2 \times 1.4 - 9 - 2 \times -1.14) = 1.792$ $= -1.14 - 0.1(11 + 8 \times -1.14 - 2 \times 1.4) = -1.$ C) Using initial guesses $X_0 = 0$ and $X_0 = 0.1$ $X_{k+1} = X_k = 2 \frac{3}{9} \times (X_k | Y_k)$ Ykt1 = Yk - X of (Xk 1 yk) $0.1(2\times0-9-2\times0)=0.9$ $0.1(41+8\times0-2\times0)=-1.1$ After one iteration of the steepest descent method with the given initial guesses and Step size, the updated valuss are X = 0.9 and y=-1. These value are the approximate minimum of the function

Thứ Ngày No. Using Newton mathod starting with initial guesses X.H(XRIGR) 8x (0,0) 4 (0,0) 1/2 (O10) 8 2x-9+2xxxxx tion

 $\propto \frac{4}{10} (8 \times -9 + 2 \times 14)$ - (2x-9+2x11) Q3) a) Let x be the number of units of product A (X>0) Let y be the number of units of product B(y>0) Product A requires 20, by Product B requires 5 he total diailable raw material is 950 Okg Product A requires 0.04 hours _ 0.12 hours The total available work hours in a week is 40 hours $0.04x + 0.12y \leq 40$ The company can only store 550kg of total product perusek