5)a) Griven,

The second secon

3 11 = M 12 = M 1 & M21 = M22 = M2,

the ridge requesion problem seeks to minimite

(y, - B, n, - B, n,) 2+ (y, -B, n) + x (B, + B,2) -Experience to the North Andrew of principle (b)

10 15 1012 - -1

where rights are estimates of exclusions (1.41 + h 11) 2 x (pc) + o1 o 1d) + (on1 = o1-1).

b) Deriving the empression in (a) with respect to Bi & By a setting them to recover by location Liginia then too i wight

> Act of a control  $\frac{\partial}{\partial S^2} = 2 \hat{B}_1 N_{11} - 2N_{11} Y_1 + 2 \hat{B}_2 N_{11} N_{12} + 2 \hat{B}_1 N_{21}$ -2 721 42+ 2B3 N21 711+ 21B1=0

to Indexton ord to product in the interior ign is

and 1 (28) 1 = 1 (28) 1 N 11 - 2 m 1 y + 2 Bin 1 1 1 12) + , 1/1/201 proon 100 1/2/181/1921, 12/21/21/21/21/21/21/21/21/2/1921

-0 Volume of sould

Reactiongin Above equation,

181 = niyi + 7242+ 281 2172+ 285 7172

(I) and \\( \beta\_2 = \alpha 1 \g 1 + \alpha 2 \g 2 + 2 \beta\_1 \alpha 1 + 2 \beta\_2 \g 1 \g 12

This improg that  $\beta = \beta_2$ .

Le stated as

My to the the second with the

(y, -12, 1, -12, 21) + (y2 - 12, n2) + 2 (12) + (12)

Peplacing the variables of mentioned in (b) we get

(b-Pia - Bia) + (b+ Bia+ Bia) + 2 (181+1821)

= 2 [b = 0 (B+B2) + (x (1B1)+ (B2))

Taking portial derivatives wirst stopic prana

= 4a(b-a(BITBL)] = ±x.

OF THE FIRST ME TO FIELDER C.

This ear indicates the boundary of long contraint of Big G Br one regative the sign win be - and it they were positive, it will be positive. So those one many possible Values of subjuicnts.

contains will are correct

18.8 (16 × 18.8 / 18.0 × 18.0 × 10.0

11 . I tout mayour gold