

(A)

Training data:  
(n = 2)

| ID | weight | age | sex |
|----|--------|-----|-----|
| 1  | 80     | 40  | 0   |
| 2  | 60     | 20  | 1   |

Model to fit:

weight =  $\beta_0 + \beta_1 \cdot \text{age} + \beta_2 \cdot \text{sex} + \epsilon$



Solutions:

$\hat{\beta}_0 = 40, \quad \hat{\beta}_1 = 1, \quad \hat{\beta}_2 = 0$

:

$\hat{\beta}_0 = 0, \quad \hat{\beta}_1 = 2, \quad \hat{\beta}_2 = 20$

with  $\epsilon = 0$

(B)

