

MCV

Q4

$$\hat{Y} = \text{EXP}(-5.2471 + 1.084X_1 + 0.3698X_2 + 0.0702X_3)$$

- * ① $X_1 = 0$ NOT IN ACADEMIC PROGRAM
 $X_2 = 0$ NOT IN VOCATIONAL PROGRAM
 $X_3 = 60$

$$\begin{aligned}\hat{Y} &= \text{EXP}(-5.2471 + 0 + 0 + 0.0702 \times 60) \\ &= \text{EXP}(-5.2471 + 4.212) \\ &= \text{EXP}(-1.0351) \\ &= 0.3551\end{aligned}$$

ANSWER MAY BE A REAL NUMBER.

- * ② $X_1 = 0$ NOT IN ACADEMIC PROGRAM.
 $X_2 = 1$ IN VOCATIONAL PROGRAM.
 $X_3 = 45$

$$\begin{aligned}\hat{Y} &= \text{EXP}(-5.2471 + 0 + 0.3698 + 3.159) \\ &= \text{EXP}(-2.0511) \\ &= 0.1285\end{aligned}$$

- * ③ $X_1 = 1$ IN ACADEMIC PROGRAM
 $X_2 = 0$ NOT IN VOCATIONAL PROGRAM
 $X_3 = 80$

$$\begin{aligned}\hat{Y} &= \text{EXP}(-5.2471 + 1.084 + 0 + 5.616) \\ &= \text{EXP}(1.4529) \\ &= 4.275\end{aligned}$$