

Econometrics I, quiz 11

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1. This is a 15-minute quiz
2. At **NO** point in the exam can you discuss the questions/answers with any of your colleagues.
3. When a multiple choice is present, circle the number indicating your choice of the answer.
4. Good luck. :-)

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- **Q1** : A model for log(wages) $w = y$ on education X is

1. (X, y) pairs are independent
2. Variable X is exogenous
3. Conditional normality -
 - (a) $(y_i|X_i) \sim N(\beta_0 + \beta_1 X_i, \sigma^2)$
 - (b) Variance is unconditional, σ^2 , not $\sigma_i^2 = f(X_i)$.

A sample of $N = 3877$ observations has the following statistics:

- $\sum_{i=1}^N X_i = 48943$
- $\sum_{i=1}^N y_i = 19460.1$
- $\sum_{i=1}^N X_i^2 = 645663$
- $\sum_{i=1}^N y_i^2 = 99876$
- $\sum_{i=1}^N y_i X_i = 247775$

1. What are the values of $\beta_0, \beta_1, \sigma^2$? **(3 points)**

2. Assuming β_0, β_1 is known with certainty, what is the model for the conditional *mean* of y ? **(2 points)**