

Quiz # 4  
Chapter 9  
**Suggested Answers**  
Econometrics 06216

Name: \_\_\_\_\_

- Choose the **MOST CORRECT** answer
  - You have 5 minutes to solve out this quiz
1. Assume that you estimate a Cobb-Douglas production function:  $Q = AK^\alpha L^\beta$ , and you has serious evidence to considerer constant returns to scale. You will prove this with the null hypothesis: \_\_\_\_\_ and with a: \_\_\_\_\_ .
    - a.  $H_0: \alpha = \beta$ , F-test.
    - b.  $H_0: \alpha + \beta - 1 = 0$ , Chi-squared-test.
    - c.  $H_0: \alpha + \beta > 1$ , t-test.
    - d. **None of the above.**
  2. If the  $R^2$  of regression model is 0.999, we can affirm that:
    - a. The F-statistics tends to zero.
    - b. **The F-statistics is near to infinite.**
    - c. The F-statistics tends to one.
    - d. The F-statistics converge to 100.
  3. Assume you add more explanators to certain multiple regression model, you can affirm that:
    - a. **The F-test is more likely to reject.**
    - b. The adjusted  $R^2$  will decrease.
    - c. The  $R^2$  will increase exponentially.
    - d. All of the above.
  4. Assume that you were hired by the Federal Reserve of the United States and you have been asked about a recently structural change (regime shifts) in the country's consumption function. You will consider:
    - a. **Execute a Chow test with fracture point September 11 of 2001.**
    - b. Execute a Wald test with fracture point Iraq war.
    - c. Execute a Dummy test with fracture point The Great Depression.
    - d. All of the above.
  5. Assume that you have estimate two constant elasticities demand function of gasoline for the south and north of certain city. You have evidence to think that the price elasticity of the south is twice the price elasticity of the north of the city. How many rows will have the R matrix (numbers of linear constraints)?
    - a. **1**
    - b. 2
    - c. 3
    - d. 4