

NAME: \_\_\_\_\_

## QUIZZ ON LECTURE 3

- How do you interpret the 0.083 in the following:  $\widehat{\log(wage)} = 0.58 + 0.083educ$  (2pts)
  
  - Fill in the blank: “A linear model means linear in ...” (2pts)
  
  - How do you interpret the 8.4 in the following:  $\widehat{lifeExp}_i = -9.1 + 8.4 \log(gdpPercap_i)$  (2pts)
  
  - How does the variance of the OLS estimator vary with sample size? (1pts)
  
  - How can you check visually for heteroskedasticity? And for normality of the residuals? (3pts)
  
  - **Bonus:** What is the formula for the (conditional) variance of the OLS estimator? Write it as a function of  $X$  and of an additional term (that you will need to define)
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