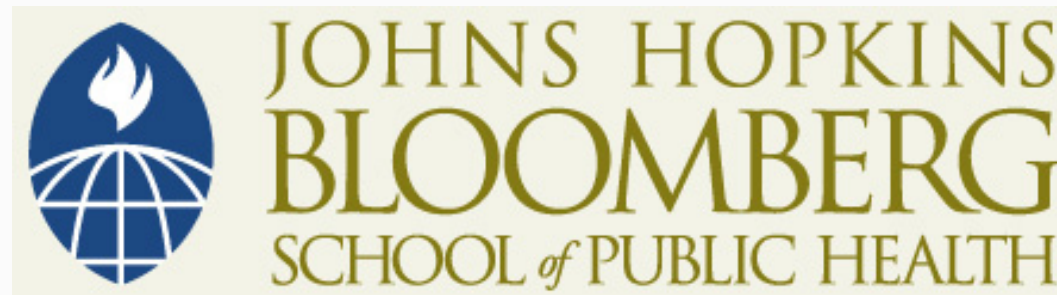


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Lecture 4c: Practice Problems

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Example: Wages and Education Level

1. Recall equation of regression line relating estimated mean hourly wages (U.S. \$, 1985) to years of education: from Stata . . .

$$\hat{y} = -0.75 + 0.75x$$

- a) What is the estimated mean hourly wage (in 1985) for persons with 12 years of education?
- b) What is the estimated difference in hourly wages (in 1985) for persons with 16 years of education versus 12 years of education?

Example: Arm Circumference and Sex

2. Recall the regression relating arm circumference to child's sex for the random sample of 150 Nepali children less than 12 months old

$$\hat{y} = 12.5 + -0.13x$$

- In this example, x is the binary variable for sex, coded as a 1 for female children and 0 for male children; suppose x was coded as 1 for male children and 0 for female children
 - a) What would the resulting slope estimate be?
 - b) What would the resulting intercept estimate be?