

# Econ 2016: Principles of Microeconomics

Homework 1 (Total score: 20 Points)

Due Date: Aug 22th, 12:40 PM

## 1. Multiple Choice: Describe some of the potential opportunity costs

C 1. (2 points) Going home for Thanksgiving vacation.

- A. Cost of the trip home is worthy \$5000 *Cost.*
- B. Time spent at home is value equivalent to \$3000
- C. Time spent studying is value equivalent to \$8500
- D. All of the above
- E. None of the above

① What do you give up?  
or what could have you done?  
② choose the highest value one.  
Among sth that you give up.

BD 2. (2 points) Riding your bicycle 20 miles every day. (Check all that apply.)

- A. Cost of maintaining the bicycle: \$20
- B. Time spent on other leisure activities is value equivalent to \$50
- C. Time spent exercising is value equivalent to \$20
- D. Time spent resting is value equivalent to \$50

B 3. (3 points) The federal government using tax revenue to purchase 10,000 acres in Florida for use as a bird sanctuary. Except this project, the government has four other alternative choices:

- A. A gym the government could have purchased with that money, and the gym is expected to bring profits around \$120,000 per year, and it can be used for 20 years. = \$2400000
- B. A Outlets commerce center that the government could have purchased with that money and the Outlets is expected to bring total profits around \$3,360,000 across all years.
- C. A public school the government could have purchased with that money, and the school could not bring any profits, but it can improve the local education level on average, which is valued at \$3,000,000.
- D. A group of apartments the government could have purchased with that money and are expected to bring profits around \$2,000,000.

## 2. True or False: If it is false, please write down the correct answer.

A 1. (2 points) The collection and use of data to test economic theory is called empirical economics.

- A. True B. False

Correct answer:

B 2. (2 points) To analyze the relationship between two variables while holding the values of other variables unchanged is a device known as Ockham's razor

- A. True B. False *ceteris paribus.*

Answer:

**3. Short Answer Questions (3 points):** Economists have identified educational attainment as a potential predictor of who marries whom. Highly educated individuals marry other highly educated individuals, and people with less education marry similar people. Explain why this may or may not be a causal relationship.

Reason → Outcome  
 edu. → marriage, outcomes.

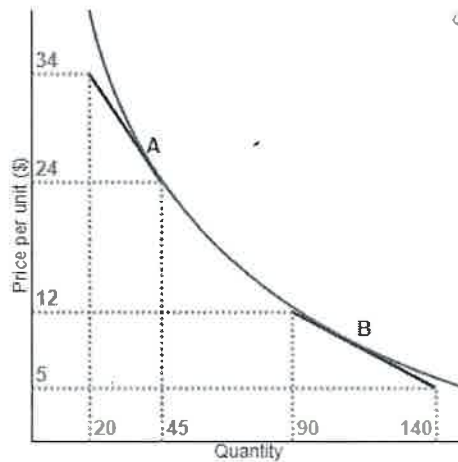
**4. Reading Graphs Questions (2 points):** Read the below graph and calculate the slope of the demand curve at point A, and the slope of the demand curve at point B. Please show your steps. Tips: Slope =  $\frac{Y_2 - Y_1}{X_2 - X_1}$

A:

$$\begin{aligned} \text{slope} &= \frac{24 - 34}{45 - 20} \\ &= \frac{-10}{25} \\ &= -0.4 \end{aligned}$$

Slope is negative.

Figure 1: Question 4



B:

$$\begin{aligned} \text{slope} &= \frac{5 - 12}{140 - 90} \\ &= \frac{-7}{50} \\ &= -0.14 \end{aligned}$$

**5. Critical thinking Question (5 points):** Should higher education be subsidized by the government? Why or Why not? (There is no standard answer, but your responses will be graded based on: 1. Has evidence and reasons to support your statement or not; 2. Has a clear, logical structure or not. Tips: Think about the definition of "opportunity cost" and how to use it to answer this question.)