



B.E. International Program

Faculty of Economics, Thammasat University



EE211: Principles of Microeconomics, Semester 1/2016

Problem Set 1

Instructions

- 1) To complete the homework assignment, you are allowed to discuss the problems with your colleagues but have to write up solutions completely on your own. **Copying is plagiarism and will be treated as an honor code violation.**

More information: <http://www.plagiarism.org/plagiarism-101/types-of-plagiarism/>

- 2) Do all works with your handwriting.
- 3) **The date of submission is by Friday 16th September 2016, before lunch time (12.00) at B.E Office. For late Submission, only half of your full scores will be awarded.**
- 4) If you have questions, please send us your message at : thanet@econ.tu.ac.th or pwrasai@econ.tu.ac.th

1. A university produces two commodities: Research and teaching. The resource the university uses includes faculty and staff, libraries, classroom and so on. The following table indicates some point on the university's PPC:

Combination	Value of Output	
	Research	Teaching
A	900	0
B	750	20
C	600	45
D	450	75
E	300	110
F	150	150
G	0	200

- a) State necessary assumptions for PPC. Suggest possible circumstances that the outputs would not lie on the PPC.
- b) Draw PPC with the information given on the table. Plot “Teaching” on the horizontal axis and “Research” on vertical axis.
- c) Illustrate which areas of the graph correspond to unattainable production points, production points that make the most effective use of the university’s resource, and points where there are unemployed resource
- d) Calculate the opportunity of producing additional unit of research. Suppose that the university is at point B but would like to alter production to point C, what would be the per-teaching-unit opportunity cost of producing the extra research? Does research production be the university exhibit increasing, constant, or decreasing per-unit opportunity costs?
- e) What will happen to the university’s PPC if the main laboratory burns down (assume that the laboratory is not used to produce teaching but is used solely to produce research)? Graph the new PPC.
- f) Suppose the university is at point F. The university president proposes to move the production to point B; she claims that B is more desirable choice since the total output is $720+20=770$ unit of output at B versus $150+150=300$ output unit at F. Is the president correct?

2. Suppose that the price of basketball tickets at your college is determined by market forces. Currently, the demand and supply schedules are as follows:

Price (\$)	Quantity demanded	Quantity supplied
2	1,000	200
4	800	400
6	600	600
8	400	800
10	200	1,000

- a.) Draw the demand and supply curve.
- b.) What are the equilibrium price and quantity of tickets?

- c.) Your college plans to increase total enrollment next year. The additional students will have following demand schedule:

Price (\$)	Quantity demanded
2	400
4	300
6	200
8	100
10	0

Now add the old demand schedule and new demand. What will be the new equilibrium price and quantity?

3. Suppose that price of a bottle of drinking water at university is determined by market forces. Currently, the demand and supply schedules are as follows:

Price (\$)	Quantity demanded	Quantity supplied
4	10,000	2,000
8	8,000	4,000
12	6,000	6,000
16	4,000	8,000
20	2,000	10,000

- Draw the demand and supply.
- What are the equilibrium price and quantity?
- Suppose that producer discover a new technology that increases productivity of production process. What will happen to equilibrium price and quantity? (Illustrate in the graph you have constructed.)

- d.) Suppose that parents of all students has to pay more tuition fee which means that students would get less money, what will happen to equilibrium price and quantity? (Illustrate in new graph with explanation)
- e.) Suppose that price is increased from \$12 to \$16. What is elasticity of demand? And what will happen to consumers' surplus? By how much? (Use midpoint method in your calculation)

What I hear, I forget.

What I see, I remember.

What I do, I understand.

- Kung Fu Tzu (Confucius)