

Assume a small economy that uses its available resources and technology to produce two commodities: cheese cake and jeans. Suppose the combinations of both goods that can be produced at the same time are as follows:

Possibilities	Jeans (million pairs per year)	Cheese Cake (million tons per year)	Rate of trade-off
A	0	50	
B	10	48	
C	20	42	
D	30	34	
E	40	20	
F	50	0	

- Graph the production possibilities frontier (PPF) implied by the table above by plotting the quantities of jeans (J) on the x -axis and quantities of cheese cake (CK) on the y -axis. Label your diagram properly.



- Compute for the rate of trade-off ($\frac{\Delta CK}{\Delta J}$) as the economy moves from one possibility to another.

Write your answers on the table provided.

CLINCHER 1: Interpret and state the importance of the rate of trade-off from possibility B to possibility C; from possibility D to possibility E.

CLINCHER 2: What generalization(s) related to scarcity and opportunity cost can you infer from your answers in number 2 and clincher 1?

3. Consider any point outside the PPF. Briefly explain what condition this point implies and what may be done about it.

4. Suppose that based on the combinations possible, the government decides that it will produce 42 million tons of cheesecake and 20 million pairs of jeans (combination C) every year. However, the government realized at the last moment that it is its moral duty to provide food for its people such that it decides to produce 50 million tons of cheese cake instead, while maintaining its production of 20 million pairs of jeans. Is such a combination attainable from the given possibilities? Briefly explain why.

CLINCHER 3: What generalization(s) can you form regarding the situations described by the points inside, on and outside the PPF?

CLINCHER 4: Suppose it is imperative to produce 50 million tons of cheesecake regardless of the pair of jeans. What are the possible ways by which such a situation can be made possible? Briefly explain your answer.

5. Assume that a higher level of specialization doubles productivity in the production of cheese cake, all other things remaining the same. Draw another PPF (no numbers needed, just an intelligent estimate) for cheese cake and jeans, clearly showing the situation of the PPF *before* and *after* specialization.
6. Suppose a natural calamity occurs that reduces the supply of all resources by equal proportions. Draw another PPF showing its situation *before* and *after* the calamity.



CLINCHER 5: What factors affect the PPF, and what kind(s) of effect(s) do they have on the PPF?

Below are 10 prices (P), each one associated with a particular quantity (Q) of special edition The Matrix Trilogy DVD Set. Plot these P - Q pairs in a figure with P on the y -axis and Q on the x -axis. Join the points to form a smooth curve and be sure to label the figure completely:

P	10	9	8	7	6	5	4	3	2	1
Q	1	1.5	3	6	10	16	24	33	44	58

1. Is this curve more likely to represent a supply or a demand curve? Why?

Plot the following 10 P - Q pairs in the same figure and form the curve:

P	10	9	8	7	6	5	4	3	2	1
Q	46	44	42	39	35	30	24	17	9	0

2. What would these set of points represent: a demand or supply curve? Why?

CLINCHER 1: What is the general relationship between P and Q as dictated by demand and supply? Mention three ways to represent the demand and supply relationship.

3. Given the data above, what would be the equilibrium price and quantity? Why would such a combination be the market equilibrium?

CLINCHER 2: What does *equilibrium* mean? How does it directly apply to demand and supply?

4. If price stood temporarily at PHP 7.00, what would best describe the situation? (Encircle the letter of the correct answer.)
 - a. quantity demanded would be less than quantity offered for sale and competition among sellers would drive price lower
 - b. quantity offered for sale would exceed quantity demanded and competition among sellers would drive price higher
 - c. quantity demanded would exceed quantity offered for sale and competition among sellers plus buyer awareness of shortages would drive price lower
 - d. quantity demanded would exceed quantity offered for sale and competition among buyers plus seller awareness of shortages would drive price higher

5. If price stood temporarily at PHP 3.00, which alternative in number 4 would apply? _____

CLINCHER 3: How is each of the situations described in numbers 4 and 5 called? Are these situations stable or not? If the market is allowed to operate freely on its own, will these situations be perpetuated or not? Why?

6. Graphically illustrate the resulting shifts in demand and/or supply for iced tea with the occurrence of the following events. Draw one graph for each case and always start with an equilibrium position. Label your illustrations completely.

- | | |
|---|--|
| a. cost of preparing iced tea decreases | d. a widespread inflation increases both money incomes of iced tea drinkers and the costs of preparing iced tea |
| b. consumer tastes shift away from iced tea in favor of other beverages | e. the price of fruit sodas rises considerably |
| c. a recession reduces the income of iced tea drinkers | f. the government removes a heavy tariff on imports of iced tea so that domestic producers must now compete with foreign suppliers |

CLINCHER 4. What factors affect demand and supply and what kind(s) of effect(s) do they have on the demand and supply?

CLINCHER 5. What happens to the equilibrium price and quantity if there are changes to supply and demand due to the factor(s) affecting them?

- Using the demand and supply data on your previous exercise (Exercise 2), compute for the arc elasticity of demand when price decreases from PHP 4.00 to PHP 3.00. Likewise, compute for the arc elasticity of supply for the same price movement.

CLINCHER 1: What is the other way of computing for elasticity? How different is it from the arc elasticity method?

- Complete the table below which shows the demand schedule for Glazed Krispy Kremes:

P (PHP/donut)	Q_D (donuts per week)	TR (PHP)	MR (PHP)	ε
30.00	500			
27.00	1,000			
24.00	1,500			
21.00	2,000			
18.00	2,500			
15.00	3,000			
12.00	3,500			
9.00	4,000			
6.00	4,500			
3.00	5,000			

- If you were the owner of a Krispy Kreme franchise, and you are presently charging PHP 24.00/donut, will you lower the price? If so, by how much? Why?
- If you were charging PHP 15.00/donut, is it economically wise to lower the price? Why or why not?

CLINCHER 2: What is the relationship between total revenue and own-price elasticity of demand? What is the significance of the marginal revenue concept?

3. For each of the following pairs of goods, which good would you expect to have a more elastic demand (Encircle the correct answer)? Why?
- school uniforms vs. hip huggers
 - Schubert recordings vs. classical music recordings in general
 - white wine or water

CLINCHER 3: Give a simple relationship between the concept of (own price) elasticity and wants/needs.

4. Suppose that business travelers and vacationers have the following demand for airline tickets from Manila to China:

P (PHP)	Q_D by Business Travelers (tickets)	Q_D by Vacationers (tickets)
1,500.00	2,100	1,000
2,000.00	2,000	800
2,500.00	1,900	600
3,000.00	1,800	400

As the price of tickets rises from PHP 2,500.00 to PHP 3,000.00, compute for the price elasticity of demand for

- business travelers
- vacationers

CLINCHER 4: Why might vacationers have a different elasticity than business travelers?

5. Suppose that your demand schedule for Astroboy DVD's is as follows:

P (PHP)	Q_D when Income is PHP 10,000.00 (discs)	Q_D when Income is PHP 12,000.00 (discs)
8	40	50
10	32	45
12	24	30
14	16	20
16	8	12

As your income increases from PHP 10,000.00 to PHP 12,000.00, compute for your income elasticity if the price of each concept shoe is

a. PHP 10.00

b. PHP 14.00

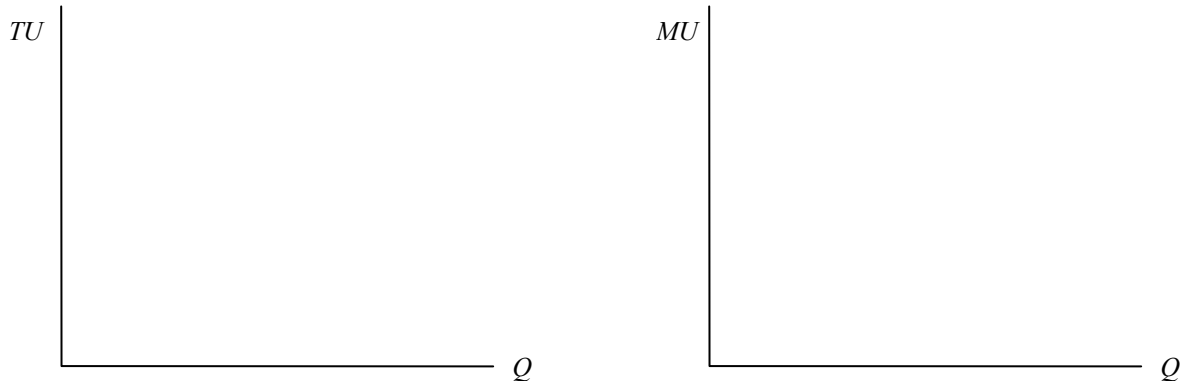
CLINCHER 5: Based on your income elasticity, what type of good for you is the Astroboy DVD? Why? What does having such a kind of income elasticity for such discs mean?

CLINCHER 1: How different are ordinal and cardinal utility from each other? Simplify your answer.

1. Complete the table below:

Quantity of a Good Consumed (Q)	Total Utility (TU)	Marginal Utility (MU)
0	0	
1	7	
2	12	
3	16	
4	19	
5	21	
6	23	

2. Show the relationship between TU and Q , and MU and Q by plotting the corresponding points in a graph:



CLINCHER 2: What do you observe about the values of marginal utility as more of a certain good is consumed? What law or principle does the behavior of marginal utility follow? Explain this principle briefly.

CLINCHER 3: Briefly explain why if MU is decreasing, then TU is rising at a decreasing rate.

CLINCHER 4: Differentiate marginal utility from total utility. Which concept gives relatively more valuable information in economic reasoning and decision-making?

3. Dexter is in his laboratory cramming for his first long examinations in subjects other than PHYS 13 and CHEM 40. He only has 6 more hours to study for ENG 2, STAT 1 and ECON 11. Being the genius that he is, his goal is to get as high an average grade as possible in these three subjects. According to the estimates of his Computer, the grade he can make in each subject will depend upon the time allocated to studying it, as shown by the following schedule:

ENG 2		STAT 1		ECON 11	
Study Time (h)	Grade (%)	Study Time (h)	Grade (%)	Study Time (h)	Grade (%)
0	80	0	20	0	40
1	90	1	45	1	52
2	95	2	65	2	62
3	97	3	75	3	71
4	98	4	83	4	78
5	99	5	90	5	83
6	99	6	92	6	86

How should Dexter allocate his time assuming that he would like to devote at least one hour for each subject? Show how you got your answer.

4. Scott's MU from an extra bowl of noodles is 50 and his MU from an extra slice of cake is 100. If he buys noodles and cakes from Amy for PHP 10.00 per bowl and PHP 100.00 per slice respectively, what should she tell him for him to maximize his utility (Encircle the letter of the best answer)?
- he should eat more noodles
 - he should eat more cake
 - he should buy all their stocks so she can get off early
 - he should stop eating noodles
5. Use the information below to answer the following:

Units	1	2	3	4	5	6	7	8	9	10	11
MU_X	200	70	80	50	25	10	7	5	4	3	2
MU_Y	200	150	100	50	10	5	4	3	2	1	0

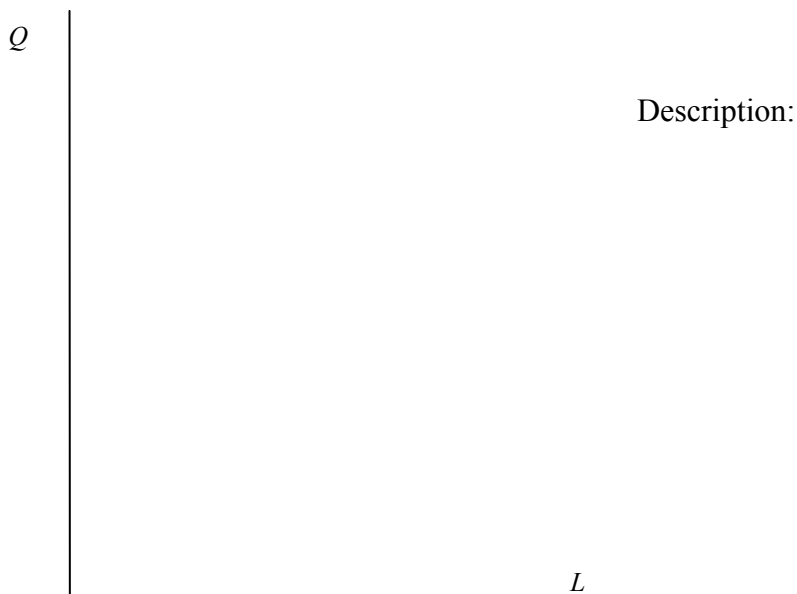
- If goods X and Y each costs PHP 1.00 per unit, identify the bundles of goods that satisfy the utility-maximizing condition. Encircle the appropriate bundles.
- Which of these bundles (in a.) would be chosen if the consumer's money were PHP 8.00? Why?
- If the consumer's money were to increase to PHP 20.00, by how much will the consumption of goods X and Y change?

CLINCHER 5: What is the utility-maximization condition of an individual under the cardinal theory of consumer behavior?

1. Complete the table below:

Labor Employed (man-hours)	Total Product (<i>TP</i>)	Average Product (<i>AP</i>)	Marginal Product (<i>MP</i>)
1	4		
2	10		
3	18		
4	28		
5	35		
6	40		
7	42		
8	42		
9	40		
10	36		

Plot the *TP*, *AP* and *MP* curves on the following set of axes and describe their behavior:



CLINCHER 1: Identify the three stages of production in the graph above.

CLINCHER 2: Which stage is relevant? Why?

2. The table on the next page show the cost data of a hypothetical firm in a perfectly competitive market. Complete the missing figures in the table.

Output	Total Cost (TC)	Total Variable Cost (TVC)	Total Fixed Cost (TFC)	Marginal Cost (MC)	Average Cost (AC)	Average Variable Cost (AVC)	Average Fixed Cost (AFC)
0	50.0						
2				7.00			
4	71.0			3.50	17.75		
6				4.50		5.00	
8	90.0				11.25		
10		50.5			10.05		
12	111.5	61.5		5.50		5.13	
14	124.5	74.5		6.50	8.89	5.32	
16	140.5	90.5			8.78	5.66	
18	162.5	112.5			9.03	6.25	
20	202.5	152.5		20.00		7.63	

Plot the *MC* and *AC* curves at the back of this sheet.

CLINCHER 3: Which of the following statements describe the relationship between these two cost curves? Encircle the letter(s) of the correct answer(s).

- The *AC* curve cuts through the bottom point of the *MC* curve as it moves to the right through higher output levels.
- The *MC* curve cuts through the bottom point of the *AC* curve as it moves to the right through higher output levels.
- The *MC* curve eventually begins to falls as it continues to move to the right through higher output levels.
- The *MC* curve eventually begins to climb as it continues to move to the right through higher output levels.

3. What happens to *AFC* as output increases? Why?

CLINCHER 4: What happens to *AC* when *AP* is increasing? decreasing? at its highest level?

CLINCHER 5: What is the general relationship between any pair of *average* and *marginal* curves?

A. Perfect Competition

The following are fixed and variable inputs and total output of a perfectly competitive firm. Given that the prices of fixed and variable inputs are PHP 100.00/unit and PHP 120.00/unit respectively, complete the table below:

Fixed Input	Variable Input	Q	TFC	TVC	TC	AFC	AVC	AC	MC
2	1	10							
2	2	20							
2	3	35							
2	4	52							
2	5	68							
2	6	83							
2	7	97							
2	8	107							
2	9	112							
2	10	112							

Fixed Input	Variable Input	Q	TR			MR			Marginal Profit/Loss $MR-MC$		
			$P=8$	$P=10$	$P=12$	$P=8$	$P=10$	$P=12$	$P=8$	$P=10$	$P=12$
2	1	10									
2	2	20									
2	3	35									
2	4	52									
2	5	68									
2	6	83									
2	7	97									
2	8	107									
2	9	112									
2	10	112									

- Applying the profit-maximizing condition for a perfectly competitive firm, at what output level(s) will profit be maximum or losses be minimum under the different price levels?

CLINCHER 1: What is the profit-maximizing condition for a perfectly competitive firm? Briefly explain your answer.

6. Applying the profit-maximizing condition for a monopolist, what quantity of videophones should Nokia produce and what price should they charge?

7. How much will be the per-unit and total profits at these price and quantity levels?

CLINCHER 4: What is the profit-maximizing condition for a monopolist? Briefly explain your answer.

CLINCHER 5: Where does the difference between the profit-maximizing conditions for a perfectly competitive firm and a monopolist come from? What gives rise to such a difference?

Fill-in the missing values:

Year	Current GNP	CPI	Real GNP	Population	Per capita Current GNP	Per Capita Real GNP	Inflation Rate
1993	178,067	100.0		46.5	3,829.4		
1994	220,957			47.8		3,934	17.5
1995		138.9	190,841		5,387.7		
1996	303,644	157.1	193,281	50.3			
1997		173.2		51.0	6,576.9	3,797	10.2
1998	378,745		198,816	52.1			
1999	527,355	286.4		53.3		3,455	50.3
2000	594,518			54.7		3,082	
2001		355.3		56.0	10,969.5	3,087	

1. What are the general formulas used in computing for the missing values?

CLINCHER 1: Why is it important to adjust the GDP or GNP for changes in prices? in population?

CLINCHER 2: State at least two limitations of the GNP as a measure of national output.

Consider an economy that is composed of three firms. The income statements of the three firms are as follows:

Item	Firm A	Firm B	Firm C
<i>Sales</i>	1000	2000	3000
<i>Costs</i>			
Wages	100	200	300
Rent	100	200	300
Interest	100	200	300
Purchases from Firm A	0	100	200
Purchases from Firm B	50	0	200
Purchases from Firm C	50	100	0
<i>Profits</i>	600	1200	1700

2. Calculate the economy's GDP using the
- expenditure approach:
 - income approach:
 - value-added approach:

CLINCHER 3: How different is the value-added approach from the income approach of GDP computation?

Suppose you were able to collect the following information on the national accounts of the City of Townsville for 2002:

Compensation of Employees	100,000	Net Factor Income from Abroad	10,000
Depreciation	10,000	Net Operating Surplus	60,000
Exports	75,000	Personal Consumption Expenditure	100,000
Government Consumption Expenditure	50,000	Services	80,000
Imports	80,000	Statistical Discrepancy	5,000
Indirect Business Taxes Less Subsidies	5,000	GDP Deflator	150
Industry	50,000	Population	1,000

3. Calculate the GDP using the income approach.

CLINCHER 4: There are two missing items in the table. What are these items and their corresponding values so that you can compute for the GDP using the expenditure and the value-added approaches?

4. Calculate the following:
- GNP
 - Real GDP
 - Real Per Capita GDP

CLINCHER 5. If the Powerpuff Girls had 900 people to look after in 2001 and the city's GDP is PHP 150,000.00 with the GDP Deflator being 100, comment on the performance of Townsville in 2002 relative to 2001.

Given the following data (in thousand US Dollars) on the students of Pokey Oaks Kindergarten, fill-in the missing values:

Income (Y)	Consumption (C)	Savings (S)	Investment (I)
880		0	120
1000	940		120
1120		120	120
	1060	180	120
1360	1120		120
	1180	300	120

1. What is the value of the marginal propensity to consume? to save?

CLINCHER 1: What is the consumption function of these students? Write down the specific formula.

2. Assuming there are no government and foreign sectors, what is the equilibrium level of income (Y^*)?
3. What is the value of the Keynesian simple multiplier?

CLINCHER 2: Briefly explain the economic implication of this value.

4. Suppose that investment increases by USD 60 thousand, what will be the new Y^* ?
5. Graphically illustrate the effect of an increase in I on Y^* at the back of this page.

Assume the following Keynesian model of a simple economy without a foreign sector (values are in million Philippine Pesos):

$$C = \bar{C} + mpcYD = 50 + 0.8YD$$

$$YD = Y - T$$

$$T = 125$$

$$I = 75$$

$$G = 100$$

6. Calculate Y^* .

7. What is the value of the autonomous spending multiplier? the tax multiplier?

CLINCHER 3: The government wants to raise the equilibrium level of income by PHP 250 million. To do this, it could either increase government spending or lower the taxes it collects from the public. How much should the increase in government spending be?

CLINCHER 4: On the other hand, instead of increasing its expenditures, the government decides to lower taxes in order to raise income. How much should lump sum tax collections be reduced?

CLINCHER 5: Write TRUE if the statement is correct. Otherwise, write FALSE.

- _____ a. If output is greater than AE, unintended inventories are being drained.
 _____ b. If mps is 1, the simple multiplier will be equal to 1.