

Lab #6
Agricultural and Resource Economics
(ARE 012)

Name: _____

Day/Time of Lab: _____

This lab assignment is worth 100 points.

Purpose of Lab:

This assignment will review some of the basic economic concepts covered in lecture since the last lab, help you determine if a second job is worthwhile, and teach you how to analyze your expenses.

Assignments:

1. Reviewing Basic Economic Concepts from Lecture. Respond to the questions below by choosing the best answer. You may want to refer to your notebook, lecture notes, and textbook.

- i) The following words are key in the definition of economics as presented in class:
 - a) demand and supply
 - b) normative and positive
 - c) profit and losses
 - d) choices, scarcity, and time
 - e) none of the above

- ii) Rational behavior means:
 - a) a person is educated
 - b) a person that is consistent with or based on reason, is logical and learns from mistakes such that they would not be expected to repeat the same mistake
 - c) a person is sane
 - d) a person can solve difficult problems
 - e) none of the above

- iii) Goods are scarce because:
 - a) they are imported from other countries
 - b) they sometimes have to be ordered
 - c) a person can never acquire "enough" goods and services to satisfy their wants at a price equal to zero
 - d) it takes time to produce goods
 - e) none of the above

iv) Fill in the name of the factor of production that is associated with the input in the left-hand column. The first problem is worked as an example.

<i>Input</i>	<i>Factor of Production</i>
hammer	Capital
Education	
iron ore	
innovative ability	
River	
Fish	
table saw	
Building	
Soil	
managerial ability	

v) Fill in the type of payment that is earned by the factor of production in the right-hand column:

<i>Payment</i>	<i>Factor of Production</i>
	Land
	Capital
	Labor
	Entrepreneurship

vi) Let's assume that a relative gives you 100 acres of land in Raleigh. Take a moment to think about the possible uses for the land. The fact that there are probably several uses for the land demonstrates that

- a) land can be part of a production process
- b) some of the uses for land are more profitable than others
- c) choices have to be made between alternative uses of land
- d) all of the above
- e) none of the above

vii) Select the item below that represents a *good*:

- a) plumber unstops a clogged sink
- b) my instruction of this class
- c) a lemon pie
- d) taxi ride
- e) none of the above

viii) Select the item below that represents a *service*:

- a) F-150 truck
- b) hair cut
- c) lipstick
- d) computer
- e) none of the above

ix) List the six tenets (characteristics) of pure capitalism?

x) *Consumer sovereignty* means that:

- a) merchants must abide by federal trade agreements
- b) consumers ultimately determine which goods and services are produced in the economy
- c) consumers are given the *benefit of doubt* in all disputes with merchants
- d) consumers have to pay sales tax
- e) none of the above

xi) Which one of the following factors is *not* a requirement of "good" competition:

- a) large number of buyers
- b) large number of sellers
- c) government
- d) free entry and exit of market participants
- e) none of the above

xii) What is the role of prices in a market system?

xiii) What is the role of government in a pure capitalistic system?

- xiv) In reference to a pure public good, the term *collective consumption* means:
- a) the consumption of a public good by one person will not prevent other people from consuming the good
 - b) public goods are free
 - c) a person cannot be prevented from consuming a public good
 - d) a public good is equally available or accessible to all consumers
 - e) none of the above

- xv) In reference to a pure public good, the term *non-exclusion principle* means:
- a) the consumption of a public good by one person will not prevent other people from consuming the good
 - b) public goods are free
 - c) a person cannot be prevented from consuming a public good
 - d) a public good is equally available or accessible to all consumers
 - e) none of the above

- xvi) Select the pure public good:
- a) public education
 - b) N.C. Symphony concert
 - c) city bus
 - d) lighthouse
 - e) none of the above

xvii) Would the private sector provide a public good? Why or why not?

xviii) What is a quasi-public good? Would the private sector provide a quasi-public good? Why or why not?

2. Determining If A Second Job is Worthwhile. Many people think about taking a second job. For example, a spouse that stays home to take care of the children may want to know if it is worthwhile to work outside of the home. That is, the spouse would like to know how much money a job will clear after someone else is hired to take care of the children and the other expenses associated with working outside of the home are paid.

This exercise will help you determine the net pay from a second job. You may want to refer to the chapter 4 entitled "**Is a Second Job Worthwhile**" in *Everyday Economics* in answering the questions below.

The net pay from a second job is calculated as follows:

$$\begin{aligned} \text{Net Pay ("Clear")} \text{ From a Second Job} &= \\ &\text{Gross Pay from Second Job} \\ &\text{Less Change in Family's Income Taxes} \\ &\text{Less Social Security Taxes on Second Job} \\ &\text{Less Monetary Costs Associated with taking} \\ &\quad \text{Second Job (e.g., child care)} \\ &\text{Plus Monetary Fringe Benefits Associated} \\ &\quad \text{with Second Job (e.g., health insurance)} \end{aligned}$$

Answer the questions below using the following information:

Let's assume that Mary Moore's gross pay is \$70,000 per year. Her husband Ernie works at home taking care of their two children and maintaining the home. Ernie is thinking about taking a full-time job at Wal-Mart that grosses \$24,000 per year. One of the fringe benefits of the job is health insurance. Mary is currently having \$480 deducted from her paycheck on a monthly basis to provide health insurance for Ernie and the children. If Ernie goes to work at Wal-Mart, he will be covered by insurance through Wal-Mart at no direct cost to him. Mary can then cover the children for only \$200 per month

If Ernie takes the job at Wal-Mart, Mary and Ernie will have to place their children in daycare. Let's assume that the weekly cost of daycare is \$150 **per child** for 50 weeks. The cost to Ernie of commuting to work will run about \$1,800 per year.

The standard deduction for a couple jointly filing a 2008 Federal Tax Return is \$10,950. Ernie and Mary have calculated that their itemized deduction is \$14,000. The personal and dependent exemption for each family member is \$3,500. State and federal *Income Tax Rates* are attached. The combined Social Security and Medicare tax rate is 7.65%. Mary and Ernie's children qualify for the federal and state child tax credit (\$1,000 federal child tax credit and \$100 state child tax credit). They also qualify for the Federal Child and Dependent Care Credit when **both** Ernie and Mary work and their credit is \$500.

i) What is the family's income tax when Ernie does not work at Wal-Mart? You may want to refer to Lab 4 in answering this question.

Income Tax = State Income Tax + Federal Income Tax

ii) What is the family's income tax when Ernie works at Wal-Mart?

iii) What is the change in the family's income taxes when Ernie works at Wal-Mart?

Change in Family's Income Taxes = Income Taxes When Ernie Works
Less Income Taxes When Ernie
does Not Work

iv) What is the Social Security and Medicare tax on Ernie's pay?

v) What are the monetary costs associated with Ernie taking the job at Wal-Mart?

vi) What are the monetary fringe benefits associated with Ernie taking the job at Wal-Mart?

vii) What will Ernie "clear" (net pay) by taking the job at Wal-Mart?

viii) Let's assume that Ernie would work 2,000 hours per year. What will Ernie "clear" from the job at Wal-Mart on a per hour basis?

ix) What are several non-monetary costs associated with Ernie taking the job at Wal-Mart?

x) What are several non-monetary fringe benefits associated with Ernie taking the job at Wal-Mart?

xi) Should Ernie take the job at Wal-Mart? Explain your reasoning.

3. Analyzing Your Expenses. As many of you probably know, it is hard for some folks to save money. The problem is that most people have their eye on some item to buy. For example, many seniors in college plan to buy a new automobile as soon as they get a job. This exercise will help you allocate your expenditures into different categories of goods and services. You may be shocked to find how much of your income is spent on a particular category. You may want to refer to the chapter 9 entitled "**Can Anyone Tell You How to Spend Your Money**" in *Everyday Economics* in answering the questions below.

i) Allocate your annual expenditures on goods and services into the categories below.

Annual Gross Pay =

<i>Category</i>	<i>Dollars Spent or Saved</i>	<i>% of Gross Pay¹</i>
Food at Home		
Food Away from Home		
Shelter (i.e., rent or mortgage payment)		
Utilities (electricity, phone, cable, etc.)		
Household Furnishings and Supplies		
Clothing		
Transportation (i.e., gas, auto repairs, and auto loan)		
Health Care		
Entertainment		
Education		
Insurance, Pensions, and Social Security		
Other Savings and Income Taxes		
Other Spending		
Total (sum the columns) ²		

¹ Percent of Gross Pay = (Dollars Spent or Saved / Gross Pay) x 100

² Total *Dollars Spent or Saved* should equal the gross pay. Total *% of Gross Pay* should equal 100%.

ii) How does the allocation of your gross pay compare to the averages that are given in **Table 5 in *Everyday Economics*** for your income category? If your expenditures are significantly different from the averages, provide an explanation for the differences.

iii) How does the allocation of your gross pay compare to the averages that are given in **Table 6 in *Everyday Economics*** for your age group? If your expenditures are significantly different from the averages, provide an explanation for the differences.

iv) Spend a moment reflecting on your expenditures on goods and services. Are there any adjustments that you think that you would like to make?

2008 Federal Tax Rate Schedule

Married Filing Jointly: If taxable income is

Over	But not over	Your tax is	of the amount of taxable income over
\$0	\$16,050	-----10%	\$0
16,050	65,100	\$1,605.00 + 15%	16,050
65,100	131,450	8,962.50 + 25%	65,100
131,450	200,300	25,550.00 + 28%	131,450
200,300	357,700	44,828.00 + 33%	200,300
357,700	-----	96,770.00 + 35%	357,700

2008 State Tax Rate Schedule

Married Filing Jointly: If taxable income is

Over	But not over	Your tax is	of the amount of taxable income over
\$0	21,250	-----6%	\$0
21,250	100,000	\$1,275 + 7%	\$21,250
100,000	-----	\$6,787.50 + 7.75%	100,000