

SIMON FRASER UNIVERSITY
Department of Economics
HOME WORK ASSIGNMENTS

COURSE:	Economics 103	SEMESTER:	2008-2
TITLE:	Principles of Microeconomics	INSTRUCTOR:	R.Schwindt

Your assignments are taken from the textbook and questions on this handout. Some assignments are marked WRITE (they are to be written out, showing your work where appropriate) and others are marked CONSIDER (you should think about the answers to these). The WRITE questions are the type of problems that will appear on the midterm and final examinations while the CONSIDER questions are the type of essay questions. The week after assignments are due I will post answers on the Web <www.sfu.ca/~schwindt>. I strongly advise you to work through the questions on your own! I also advise you to do the "quick quizzes" in the textbook.

For practice multiple choice questions, graphing exercises and chapter notes go to the McGraw Hill website for the textbook <www.mcgrawhill.ca/olc/mcconnell>

Due the Week of May 12

Chapter 1 WRITE: [7, 10, 14], CONSIDER: [1], Appendix WRITE: [3, 4, 7]

WRITE: Use a sheet of graph paper to answer the following question:

- You have to sleep 8 hours a day. The remainder of the day you can divide between studying and leisure. Let leisure hours be the X variable and study hours be the Y variable. Plot the relationship between combinations of X and Y on your graph paper.
- What is the slope of the line that shows the relationship between study hours and leisure hours?
- You catch the flu and Health Services orders you to get 10 hours sleep a night. Draw the new relationship between study and leisure. What is the slope of this line?
- Now assume that if you don't study at all you only need 4 hours of sleep (because your leisure activities are sun-bathing and lying on the couch watching videos) But, for every hour that you study, you need an extra 15 minutes of sleep (i.e., 0.25 of an hour). Plot the relationship between combinations of X and Y on your graph paper. What is the slope of this line?

Due the Week of May 19

Chapter 2 WRITE: [8, 15], CONSIDER: [3, 10]
Chapter 3 WRITE: [3, 6, 8, 9, 12], CONSIDER [11]

WRITE:

- Diamonds were discovered in Canada's Arctic in the late 1980s. Production increased rapidly and now Canada accounts for about 15% of world gem-quality diamond production. Under the terms of the 2003 Kimberley Process, the international diamond industry undertook to stop traffic in conflict diamonds (also known as blood diamonds). Use a graph to show the likely effects of these two occurrences on the equilibrium price and quantity in the diamond market.
- The high price of oil has led to increased production of bio-fuels. Corn is a good input for the production of bio-fuels. Farmers have switched from producing wheat to producing corn. Use graphs to show:
 - the effect on the corn market of increased oil prices,
 - the effect on the corn market of farmers switching to corn production,
 - the effect on the wheat market of farmers switching to corn production,
 - the effect on the price of bread in Vancouver of all of this.

Due the Week of May 26

Chapter 4 WRITE: [2, 4, 5, 7, 11], CONSIDER: [8, 12, 13]

WRITE:

The table to the right shows prices and annual quantity demanded of widgets when average income of consumers is \$40,000/year and when it is \$60,000/year.

a. Assuming consumers have an income of \$40,000/year, use the mid-point formula to determine own-price elasticity of demand for price cuts from:

(i) \$20 to \$16; (ii) \$16 to \$12; (iii) \$12 to \$8; (iv) \$8 to \$4.

b. Again assume income of \$40,000 and assume there is a single supplier of the product. Would the supplier be indifferent between a price of \$16 and \$12/unit? Explain your answer.

c. At a price of \$16, what is the income elasticity of demand for an income increase from \$40k to \$60k?

d. Are widgets normal goods or inferior goods? How do you know?

d. Assuming consumers have an income of \$60k, what is the own price elasticity of demand for a price cut from \$16 to \$12? Compare this to your answer to a. (ii). Can you explain the difference?

Price	Quantity Demanded Income \$40k	Quantity Demanded Income \$60k
\$20	40	50
\$16	60	70
\$12	80	90
\$8	100	110
\$4	120	140

Due the Week of June 2

Chapter 5 WRITE: [1, 2, 3, 4, 10], CONSIDER: [5]

WRITE: Why does a newspaper dispenser open to a stack of newspapers and essentially “trusts” a consumer to take just one copy whereas a soft drink vending machine does not “trust” consumers and dispenses one can for each purchase?

Due the Week of June 9

Chapter 6 WRITE: [4, 6, 9, 10, 11], CONSIDER: [1, 2, 7, 12]

Write: Fill in all the blanks in the following table.

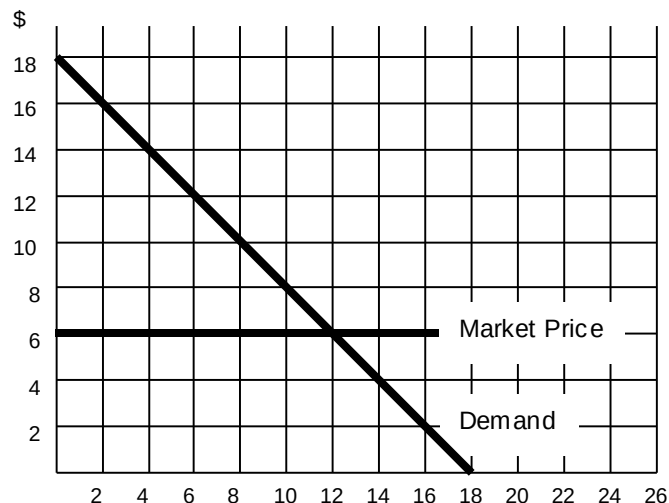
Output	Total Fixed Cost	Total Var. Cost	Total Cost	AFC	AVC	ATC	MC
0				-	-	-	-
1			190		110		
2							40
3		180					
4							40
5					54		
6						70	
7							100
8			660				

Due the Week of June 16

Chapter 7 WRITE: [3, 4, 5, 7], CONSIDER: [6]. Note! **Question 7 is very important.** Use diagrams in your answer.
Chapter 4 WRITE [17, 18]

WRITE: The figure to the right shows Bob's demand for pizzas and the market price.

- What is the value (as opposed to price) of the 10th unit consumed?
- What is the value of the 4th unit consumed?
- What is Bob willing to pay for the 4th unit?
- How much consumer surplus is generated by the 8th unit?
- How many pizzas will Bob purchase at the market price?
- What is the total amount paid for pizzas in question (e)?
- What is the total benefit (value) of pizzas in question (e)?
- What is the consumer surplus in question (e).
- Now assume the restaurant has an "all you can eat" special for \$25. How many pizzas will Bob consume (if any)? What will be his consumer surplus (if any)?



Due the Week of June 23

Chapter 8 WRITE: [4, 5, 6, 13], CONSIDER: [1, 3, 8, 10]

WRITE: The table to the right refers to a monopolist. It shows demand (e.g., at $p=\$32$, 1 unit is demanded) and costs (e.g., at $q=1$, $TC=\$36$).

- What is the profit maximizing level of output for a single price monopolist, and what are its profits (or losses)?
- Will the single price monopolist achieve allocative efficiency at the profit maximizing level of output? Explain.
- Is demand elastic or inelastic at this price? Show your calculations.
- If the firm could perfectly price discriminate, how much would it produce, what would be its profits? Would it achieve allocative efficiency? Explain.

Units	Price	Total cost
0	\$34	\$20
1	\$32	\$36
2	\$30	\$46
3	\$28	\$50
4	\$26	\$54
5	\$24	\$56
6	\$22	\$67
7	\$20	\$80
8	\$18	\$97
9	\$16	\$128
10	\$14	\$160

CONSIDER: Movie theatres price discriminate between children, adults and seniors when selling entry tickets. However, once inside the theatre everybody pays the same price for popcorn. Why?

Due the Week of June 30:

Review the midterm examination and catch-up on any unfinished assignments

Due the Week of July 7

Chapter 9 WRITE: [2, 7, 9, 10], CONSIDER: [12]
Chapter 10 WRITE: [3,4], CONSIDER: [1, 11, 12]

WRITE: There are 15 firms in an industry. The largest holds a 25% market share, the second largest 20%, the third largest 7%, and all the rest are of the same size. What are the four and eight firm concentration ratios and the Herfindahl index?

WRITE: Alpha and Beta are the only two makers of widgets, and each, independently, is trying to determine how much to produce. They each know that if they both limit production to 10,000 units a day, they will make the maximum attainable joint profit of \$200,000 a day—\$100,000 a day each. They also know that if either of them produces 20,000 units a day while the other produces 10,000 a day, economic profit will be \$150,000 for the one that produces 20,000 units and an economic loss of \$50,000 for the one that sticks with 10,000 units. And they also know that if they both increase production to 20,000 units a day, they will both earn zero economic profit.

- a. Construct a payoff matrix for the game that Alpha and Beta must play.
- b. Find the "prisoners' dilemma" solution to this game.
- c. What is the likely equilibrium if this game is played repeatedly?

Due the Week of July 14

Chapter 11 WRITE: [2, 3, 5, 6, 7], CONSIDER: [1]

WRITE: During the 1980s Fraser Valley raspberry growers found it increasingly difficult to find people to pick their crops. Students were no longer willing to do the work and recent immigrants were finding better paid jobs. Many farmers purchased mechanical harvesting machines that cost upwards of \$125,000. What impact did this have on the demand for human berry pickers? What does that imply about the relative strengths of the substitution and output effects? Currently some farmers are hiring Mexican pickers under the Seasonal Agricultural Workers Program (SAWP). What will happen to the demand for mechanical harvesters if this programme expands?

Due the Week of July 21

Chapter 12 WRITE: [3, 4, 6, 7], CONSIDER: [1, 5, 10]

CONSIDER: Why do labour unions often resist the deregulation (e.g., airlines, telecommunications) of the industries in which their members work?

Due the Week of July 28

Chapter 13 WRITE: [2, 4, 10], CONSIDER: [1, 6]
Chapter 14 WRITE: [2, 3, 9], CONSIDER: [5, 7, 11]

WRITE: Explain the rule for calculating present discounted value of a perpetual income stream.

In preparation for the final examination

Chapter 15 WRITE: [1, 2, 3, 12], CONSIDER: [4, 7]

CONSIDER: Markets "fail" in the following situations: (a) monopoly, (b) inadequate information, (c) externalities, (d) public goods, (e) common property resources. Explain what is meant by market failure. Give two examples of each of these sources of failure.