

Midterm I
50 minutes
Introduction to Microeconomics 1101 – Lecture 1
Michael Rolleigh

Name: _____

Section Number: _____

TA Name: _____

The above is worth 5 points (not bonus).

On the following pages, please show all of your work.
If you need more space, use the back of the page.
Calculators are NOT allowed.
Fully label all graphs.

Question 1 (16 points)

Mr. Pink and Mr. Blonde are trapped on a desert island. Only two production possibilities exist on the island, jewelry and guns. The table below shows the time required to produce a good for each person:

	Jewelry	Guns
Mr. Pink	5 hours	3 hours
Mr. Blonde	10 hour	5 hours

Assuming that Mr. Pink and Mr. Blonde are endowed with **60** hours each, sketch a Production Possibility Frontier for Mr. Pink and sketch a Production Possibility Frontier for Mr. Blonde, putting jewelry on the X-axis.

Calculate their opportunity costs and fill in the table below with your answers:

	Jewelry	Guns
Mr. Pink		
Mr. Blonde		

Who has a comparative advantage in guns (according to the above data, not the movie)? Why?

Who has the absolute advantage in guns? Why?

Question 2 (15 points)

Consider the perfectly competitive market for Sony Playstation2's.

Sketch a demand/supply diagram for the market for Sony Playstation2's. Label the equilibrium price and quantity on your diagram (you do not need to fill in numbers here, you can just use P^* and Q^*).

You study survey data and observe that if Playstation2's cost \$300, then 20 Game Cubes are demanded, while if Playstation2's cost \$600, 30 Game Cubes are demanded. You are also informed that if Playstation2's cost \$350, 1000 Playstation2's are demanded, and if Playstation2's cost \$400, then 800 Playstation2's are demanded.

Calculate the Cross Price Elasticity of Demand for Playstation2's and Game Cubes. How are these two goods related?

Suppose the price of Game Cubes increases. Draw and label the effects of this shift on your diagram from above. Label the new equilibrium price and quantity. In a sentence or two, explain why you changed your diagram in this manner. Explicitly state what happened to equilibrium price and quantity.

Question 5 (15 points)

Consider the consumer's choice between Ultimate Fighting Tickets and Twins Tickets. Assume that Income = \$1000

Price of Ultimate Fighting Tickets = \$10

Price of Twins Tickets = \$20

Draw a budget line and the consumer's optimal consumption bundle, putting Best Ultimate Fighting Tickets on the X-axis.

Assume that the consumer's Income Elasticities of Demand for the goods are:

Best Ultimate Fighting Tickets = **-3.3** (be sure to note the negative sign)

Twins Tickets = **.65**

Graphically illustrate the effects of a decrease in price of Twins Tickets from \$20 to \$10 on the consumer's optimal consumption bundle. Be sure to use all of your relevant assumptions. Clearly illustrate the income and substitution effects caused by the price shift.

Question 6 (4 points)

Suppose an econometrician (an economist who specializes in statistical analyses) tells you the following:

$$Q_D = 1000 - 5P$$

$$Q_S = 100 + 10P$$

Find equilibrium price and quantity.

Question 7 (10 points)

Derive 3 points on Bob's demand curve for shoes, given that Bob's income is \$500. Clearly indicate where the points on the demand curve come from. Your answer should include at least two graphs.

Question 8 (10 points)

Suppose that Silly Simran (my boss) consumes only 2 goods, chocolate cake and red pens. Assume her income is \$1000, and the prices of chocolate cake and red pens are \$10 and \$2 respectively. Suppose that you know that at her current consumption bundle, Simran is spending all of her money, but her marginal rate of substitution is higher than the ratio of prices (her indifference curve is steeper than her budget constraint at her current consumption bundle). Fully illustrate the situation, using all info provided, and putting chocolate cake on the x-axis.

Is Silly Simran maximizing her utility? How should she change her current bundle to raise her utility? Label her optimal consumption bundle on your graph above.

Bonus (4 points)

What is the marginal rate of substitution at the optimal consumption bundles in problems 5 and 8?