

EC2040 Principles of Microeconomics  
Homework #3  
Due: October 13, 2014  
Total Points: 20

1. The accompanying table gives part of the supply schedule for personal computers in the United States:

Price of Computer	Quantity of Computers Supplied
\$1,100	12,000
\$900	8,000

- a. Calculate the price elasticity of supply when the price increases from \$900 to \$1,100 using the midpoint method. (3 pts)

2. Use an elasticity concept to explain each of the following observation:

During economic booms, the number of new personal care businesses, such as gyms and tanning salons, is proportionately greater than the number of other new businesses, such as grocery stores. (4 pts)

3. Patty delivers pizza using her own car, and she is paid according to the number of pizzas she delivers. The accompanying table shows Patty's total benefit and total cost when she works a specific number of hours.

<b>Quantity of Hours Worked</b>	<b>Total Benefit</b>	<b>Total Cost</b>
0	\$0	\$0
1	\$30	\$10
2	\$55	\$21
3	\$75	\$34
4	\$90	\$50
5	\$100	\$70

- a. Use marginal analysis to determine Patty's optimal number of hours worked. (3 pts)

- b. Calculate the total profit to Patty from working 0 hours, 1 hour, 2 hours, and so on. Now suppose Patty chooses to work for 1 hour. Compare her total profit from working for 1 hour with her total profit from working the optimal number of hours. How much would she lose by working for only 1 hour? (3 pts)

