

**Lab 4**Name KEY\_\_\_\_\_**ARE 201, Fall 2009**

1. Below are the total costs for each possible monthly production level of couches made by Tarheel Furniture Company. If Tarheel Furniture Company is a price-taker and the current price is \$400 per couch, calculate the revenues and profits for each production level.

<u># couches made &amp; sold</u>	<u>total cost</u>	<u>revenues</u>	<u>profit</u>
0	\$30,000	<b>\$0</b>	<b>-\$30,000</b>
100	\$50,000	<b>\$40,000</b>	<b>-\$10,000</b>
250	\$75,000	<b>\$100,000</b>	<b>\$25,000</b>
500	\$125,000	<b>\$200,000</b>	<b>\$75,000</b>
1000	\$350,000	<b>\$400,000</b>	<b>\$50,000</b>

What is the profit-maximizing production level (# couches)? **500**

**OVER**

2. Now let's say Tarheel Furniture Company is a price-setter because buyers consider their couches to be different than competitors' couches. So now Tarheel Furniture Company's sales will be dependent on their price, as follows. Calculate the revenues and profit for each production level.

<u>Price</u>	<u># couches made &amp; sold</u>	<u>total cost</u>	<u>revenues</u>	<u>profit</u>
-	0	\$30,000	<b>\$0</b>	<b>-\$30,000</b>
\$550	100	\$50,000	<b>\$55,000</b>	<b>\$5,000</b>
\$500	250	\$75,000	<b>\$125,000</b>	<b>\$50,000</b>
\$450	500	\$125,000	<b>\$225,000</b>	<b>\$100,000</b>
\$400	1000	\$350,000	<b>\$400,000</b>	<b>\$50,000</b>

What is the profit-maximizing production level of couches? **500**

3. In the price-setter case (#2), what is the marginal cost and what is the marginal revenue in going from making 500 couches to making 1000 couches?

Marginal cost: **\$450**

Marginal revenue: **\$350**

Based on your calculated marginal cost and marginal revenue, should Tarheel Furniture Company go from making 500 couches to 1000 couches (YES or NO)? NO