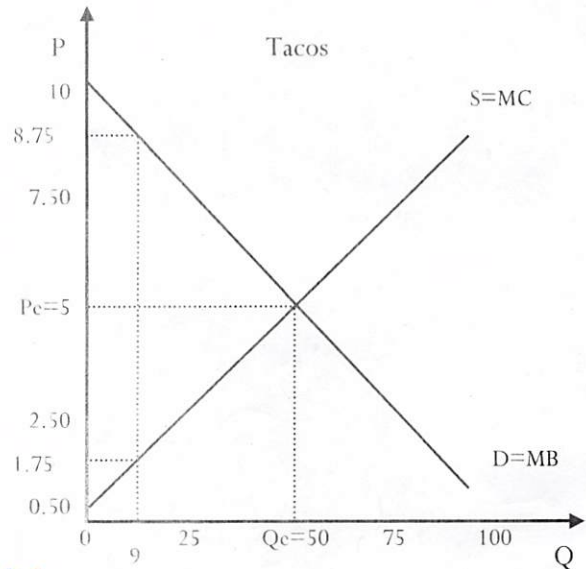


Instructions: These problems address economic efficiency, found in ch. 7, and related lecture material.

- The graph illustrates the taco market in Charleston. Answer the following questions based on the information provided in the graph.
 - Generally, how do we find the benefit from consuming a particular taco? *height of D*
 - How much marginal benefit does the consumption of the 9th taco provide? *\$8.75*
 - Generally, how do we find the cost of producing a particular taco? *height of S*
 - What is the marginal cost of producing the 9th taco? *\$1.75*



- Calculate the consumer surplus (CS) from taco consumption if tacos sell for the market equilibrium price (Pe) of \$5 each.
(Hint: The area of a triangle = $\frac{1}{2} * b * h$) **5 = 10-5*
*= $\frac{1}{2} * 50 * 5 = \$125$*
- Calculate the producer surplus (PS, or profit) from taco consumption, assuming tacos sell at the market equilibrium price (Pe) of \$5 each. **4.50 = 5 - 0.50*
 *$\frac{1}{2} * 50 * 4.50 = \$112.50$*
- Calculate the *total cost* of producing the market equilibrium quantity (Qe) of tacos, which is 50 in this example.
(Hint: You want to calculate the value of the shape below the supply curve up to Qe. One way to do this is to subtract PS (calculated in (3)) from the total revenue (Pe*Qe) of producing 50 tacos.
 $250 - 112.50 = \$112.50$

- The table illustrates the marginal cost of producing beer by the keg. Three Charleston producers are shown in the table. Use the information in the table to answer the questions below.

- Suppose Charleston has a 'beer czar' who assigns production quantities to breweries to minimize the total cost of producing a particular total amount of beer. If the czar wants 12 kegs produced this week, how much should each brewery be assigned to produce?

Munkle: 5 Palmetto: 3 Revelry: 4

- Even though the table does not show the *total cost* of producing 12 kegs, how can the czar be assured that the TC is, in fact, minimized for 12 kegs? (In other words, what's the TC minimizing rule for production?) *TC min occurs when MC is same across all producers*

These numbers show the order in which I chose kegs.

Kegs of Beer	Munkle MC	Palmetto MC	Revelry MC
1	5	1	2
2	6	4	3
3	7	7	8
4	9	8	12
5	10	9	15
6	13	10	8
7	14	11	8
8	16	12	9

- If instead of 12 kegs, the czar wants 16 kegs produced because they expect a lot of tourists in town this weekend, what would be the best way to assign the production? Munkle: 8 Palmetto: 3 Revelry: 5

- Now assume there is a free market for beer, and the price per keg is \$70.

- How much beer would each brewery produce? Munkle: 5 Palmetto: 3 Revelry: 4
- What can you say about the TC of producing this number of kegs, when the breweries choose to produce the amounts above? *The TC will be min. producing 12 kegs this way, since MC_{munkle} = MC_{palmetto} = MC_{revelry}*