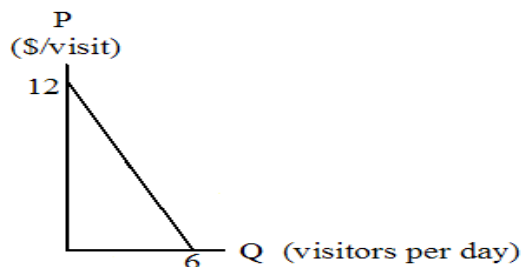


Problem Set 2, Econ 2100
Fall 2009

- 1 "With oil price close to \$70 a barrel and world economic recovery on sight, expectations are that the Organization of the Petroleum Exporting Countries (OPEC) will increase production at their next meeting," according to a news item.
- a) Draw a demand-supply graph to illustrate the situation in the world oil market. The price is \$70 a barrel, and output is 30 million barrels a day.
 - b) OPEC was expected to increase its production by 1 million barrels a day in October. Show the effect of this expected increase production on your graph. How will the price of oil change? Explain your answer.
 - c) The world oil price increased drastically in recent years. But an oil minister of OPEC said, "There is no oil shortage -- on the contrary, the market is saturated with more than enough oil supplies." Explain why the price would have increased drastically in recent years if the market were saturated with oil.
 - d) If political stability deteriorates in Iraq, what changes will occur in the world oil market? Use a demand-supply diagram to illustrate your answer.
 - e) If political stability improves but average income in the world falls, what changes do you think will occur in the world oil market? Use a demand-supply diagram to illustrate your answer.
- 2 Suppose four GCSU students decide to live off campus and are looking for single bedroom apartments. The maximum price each student is willing to pay is \$300/month for a single bedroom apartment. There are three other students later join in. But two of them are willing to pay \$250/month each, while the other is only willing to pay \$200/month. Use your knowledge about supply and demand to analyze the following.
- a) If there are only four single bedroom apartments available in the town. What will be the equilibrium price of apartments then? Carefully explain.
 - b) If there are five single bedroom apartments available in the town. What will be the equilibrium price of apartments then? Carefully explain.
 - c) If there are six single bedroom apartments available in the town. What will be the equilibrium price of apartments then? Carefully explain.
 - d) If there are seven single bedroom apartments available in the town. What will be the equilibrium price of apartments then? Carefully explain.
 - e) If there are eight single bedroom apartments available in the town. What will be the equilibrium price of apartments then? Carefully explain.
- 3 The schedule below shows the number of packs of bagels bought in Davis, California, each day at a variety of prices.
- | | | | | | | | |
|------------------------------|-----|-------|-------|-------|--------|--------|--------|
| Price of bagels (\$/pack) | \$6 | \$5 | \$4 | \$3 | \$2 | \$1 | \$0 |
| # of packs purchased per day | 0 | 3,000 | 6,000 | 9,000 | 12,000 | 15,000 | 18,000 |
- a) Graph the daily demand curve for packs of bagels in Davis.
 - b) Calculate the price elasticity of demand at the point on the demand curve at which the price of bagels is \$3 per pack.
 - c) If all bagel shops increased the price of bagels from \$3 per pack to \$4 per pack, what would happen to

total revenues?

- d) Calculate the price elasticity of demand at a point on the demand curve where the price of bagels is \$2 per pack.
- e) If bagel shops increased the price of bagels from \$2 per pack to \$3 per pack, what would happen to total revenues?
4. Suppose, while rummaging through your uncle's closet, you found the original painting of *Dogs Playing Poker*, a valuable piece of art. You decided to set up a display in your uncle's garage. The demand curve to see this valuable piece of art is as shown in the diagram. What price should you charge if your goal is to maximize your revenues from tickets sold? On a graph, show the inelastic and elastic regions of the demand curve.



5. A 2% increase in the price of milk causes a 4% reduction in the quantity demanded of chocolate syrup. What is the cross-price elasticity of demand for chocolate syrup with respect to the price of milk? Are the two goods complements or substitutes?
6. In an attempt to induce citizens to conserve energy, the government enacted regulations requiring that all air conditioners be more efficient in their use of electricity. Do you think if the government regulations will be effective? Suppose that after this regulation was implemented, government officials discovered that people used even more electricity than before. Do you think if such a discovery is possible? Carefully explain why this increase might or might not have occurred.