

Review Problems for Test #2

These problems are identical in format to those on the test. Be sure and bring a calculator to the test.

A. Answer True, False, or Uncertain, and briefly explain your answer.

- (1) The marginal revenue curve is always steeper than the demand curve.
- (2) A monopolist will always have positive profits.
- (3) If the supply curve is nearly vertical, very little of a quantity tax can be passed along to consumers.
- (4) The industry supply curve is generally flatter than the individual firm supply curves.

B. Short answers.

- (1) What is the short-run shutdown condition if costs are $C(y) = 6y^3 - 24y^2 + 30y$?
- (2) What is the elasticity of demand if the demand curve is $Q = \frac{3}{\sqrt{P}}$?
- (3) What is the difference between a quantity tax and a value tax?
- (4) In what type of market structure will price be above marginal cost, but economic profits = zero for all firms?

For the following problems, please show the calculations used to arrive at your answers. Draw graphs neatly and label axes and points clearly. Round answers to the first decimal place if necessary.

C. Sarakun, Shen & Stern, a multinational corporation with costs $C(Q) = 4Q$, faces the U.S. market demand curve $Q = 400 - 50P$.

(1) What are market price and quantity?

Sarakun, Shen & Stern have a business disagreement and decide to split the company up three ways. They are unable to maintain any form of collusion and the market ends up at the perfectly competitive outcome.

(2) Now what are market price and quantity?

(3) Graph the market before and after breakup of the monopoly and indicate the deadweight loss that is regained. Also indicate the area of consumer surplus that is transferred back to the consumers from the producers.

S, S & S patch things up and decide to remerge the company. The market reverts to the monopoly levels of price and quantity. Subsequently, the government decides to subsidize this market in the amount of \$2 per unit.

(4) What are the new market price and quantity?

(5) Show the subsidy on a new graph and indicate the total amount the government has to pay to this market.

(6) What are profits before and after the subsidy?

D. The retail market for Trident spearmint gum in Middletown is perfectly competitive.

Market demand is $Q_D = \max\{100 - 100P, 0\}$.

Market supply is $Q_S = \{ 0 \text{ if } P < \$.30; 100P - 30 \text{ if } P \geq \$.30 \}$

(1) What are the equilibrium price and quantity?

Wrigley Co. spreads a rumor that brands of sugarless gum starting with the letter "T" use spider eggs in their gum-making process. Market demand drops to $Q_D = 50 - 100P$.

(2) Show the market equilibria before and after the rumor on a graph. Now what are the equilibrium price and quantity?

(3) What effect will this rumor have on the market for Dentyne spearmint gum in the short run? In the long run?

(4) How much would Trident have to spend subsidizing its gum in order to return quantity sold to its original level?

E. There will also be a short essay question on the test, worth 10-15 points.