Name_____

Problem Set #3 PAI 723 Professor John McPeak Due _____

1) Ice Scream: Milk-Fat Prices Raise Cost of Summer Treat

Wall Street Journal; New York, N.Y.; Jul 24, 2001;

Just when you really, really want an ice cream cone, the price is rising. But it isn't summertime gouging by manufacturers. The cost of milk fat, the principal ingredient in ice cream, jumped 71% during the past six months to \$2.22 at the end of June. As a result, retail prices are up 4% from last year, manufacturers say, triggering a 3% drop in consumption.

Based on the information presented above, answer the following questions.

a) Draw a supply and demand graph representing the situation in the retail ice cream market before the milk fat price rise. Illustrate on this graph where the impact of the milk fat price rise will manifest itself in the retail ice cream market.

- b) What is the implied elasticity based on the information in the last sentence?
- c) Is this a supply elasticity, an own price demand elasticity, a cross price demand elasticity, or an income elasticity? Why?
- d) Is the computed elastic inelastic, unit elastic, or elastic? What does this imply about the closeness and availability of substitutes?

2) Concert ticket prices hit new high note

USA Today, July 10, 2001 www.usatoday.com

> It costs a lot more to see your favorite band in person, and there seems to be no end in sight to the skyrocketing ticket costs. The average ticket price during the first six months of 2001 was \$46.69, a 4.2% jump from the same period last year, according to a report released Monday by the concert trade publication Pollstar. In the past four years, concert ticket prices have nearly doubled. The report suggests concertgoers have finally had enough: Ticket sales were down 15.5% this year vs. the first six months of 2000.

- a) What is the implied price elasticity of demand for concert tickets?
- b) Is this inelastic, unit elastic, or elastic? How do you interpret this finding?
- c) Do you think the situation outlined in the paragraph above could be explained by a shift in consumer tastes away from concert going in response to technology improvements in home entertainments systems between 2000 and 2001? Explain using supply and demand curves why or why not.

- d) Assume the price listed in the above paragraph is inclusive of a 12% ad valorem tax (price paid by consumers is divided up 12% to the government, 88% to the producers according to the way the policy is designed).
 - i. What is the implied tax revenue per ticket?
 - ii. What price do ticket suppliers receive per ticket?
 - iii. If the tax was removed, would the price per ticket received by suppliers increase, decrease, or stay the same? Why?

- iv. If the tax was removed, would the quantity of tickets sold increase, decrease, or stay the same? Why?
- v. Illustrate using a supply and demand graph the 12% ad valorem tax and the no tax scenario.

3) If the price of good 1 is \$3 per unit, the price of good 2 is \$6 per unit, and the consumer's income is \$90

a) draw the consumer's budget constraint.

b) draw this budget constraint if the price of good two is reduced to \$3 per unit.

c) draw the budget constraint if the consumer's income rises to \$120, with the original prices of good 1 at \$3 and good 2 at \$6.

d) draw the budget constraint if the consumer's income rises to \$180, the price of good one doubles to \$6 per unit, and the price of good two doubles to \$12 per unit. (notice anything?)

4) I prefer pork to chicken, and chicken to beef. If I say I prefer beef to pork, am I consistent with or have I violated the transitivity property? Why?

5) When we compare the following bundles to the bundle (2 units of good 1, 3 units of good 2), can we say the proposed bundle is more preferred, is less preferred, or that we can't be sure without more information: (circle one for each proposed bundle)

(1,2)	More	Less	Need Information
(3,4)	More	Less	Need Information
(1,4)	More	Less	Need Information
(5,1)	More	Less	Need Information
(5,5)	More	Less	Need Information

Plot these points in comparison to the reference bundle of (2,3).

- 6) Taxes. In all cases, describe the original equilibrium price quantity pair, the price paid by consumers, the price received by producers, the size of the tax revenue, and the quantity supplied / demanded when the tax is imposed.
 - a. Illustrate on a graph the impact of a specific tax placed on producers.

b. Illustrate on a graph the impact of an ad valorem tax placed on consumers.

c. Explain the concept of consumer incidence using the graph you drew for (b).