

UNIVERSITY OF CALGARY

Department of Economics

ECONOMICS 201

Tutorial Problem Set #1 (Chapters 2 and 3)

Ron Schlenker

1. The following points are on a country's production possibilities curve. Answer the following questions using this information.

<u>Point</u>	<u>Capital Goods</u>	<u>Consumer Goods</u>	(Put answers for part (f) here)	
			<u>Capital Goods</u>	<u>Consumer Goods</u>
A	0	150	_____	_____
B	60	130	_____	_____
C	90	90	_____	_____
D	130	50	_____	_____
E	150	0	_____	_____

- a) What is the opportunity cost moving from point C to point D (and identify the goods) ?
- b) What is the opportunity cost moving from point C to point B (and identify the goods) ?
- c) What is the per unit opportunity cost moving from point C to point B ?
- d) If current production in this economy equalled 120 capital goods and 50 consumer goods, what conclusions could be drawn ?
- e) If current production in this economy equalled 120 capital goods and 50 consumer goods, what would be the opportunity cost of moving to point D ?
- f) Suppose technology improvements affecting allowed 50% greater production of both goods. Show the new production possibilities schedule in the table above.

2. The number of hours to make one unit of the following commodities in Germany and France are shown below. Use this information to answer the questions below.

	Cars	Trains
Germany	20	100
France	50	120

- a) Which country has the absolute advantage in cars ?

- b) What is the opportunity cost of producing a train in Germany ?

- c) Which country has the comparative advantage in cars?

- d) Suppose that Germany has 800 workers and France has 600 workers. If the average workweek is 40 hours and $\frac{3}{4}$ of the workers in each country produce cars in the absence of trade, determine world production levels of cars and trains without any trade.

- e) Suppose the terms of trade are such that 4 cars trade for 1 train. If Germans continue to consume the same amount of cars as without trade, determine free trade production and consumption levels in each country and for the world as a whole.

2. Graphically illustrate the effect of the following events (in isolation) on the market for tomatoes and indicate what would happen to equilibrium price and quantity in each case. (16)

a) Early frosts hit the tomato producing regions.

b) The global economy grows strongly and worldwide incomes increase.

c) Medical research indicates that ketchup consumption leads to a variety of mental disorders.

3. Sulphur producers have been plagued by extraordinarily low prices in recent years. Suppose the producers lobby the government to improve conditions in the industry and impose some sort of price controls. Indicate what type of price control the sulphur producers would be looking for (ceiling price or floor price). Also, graphically illustrate this controlled price in a supply-demand diagram and indicate what type of situation would prevail (equilibrium, surplus or shortage) in the sulphur market once the price control was in place.

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Tutorial Problem Set #3 (Chapter 5)

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Use the information below to answer the following questions. Show all your work and briefly explain any conclusions you reach.

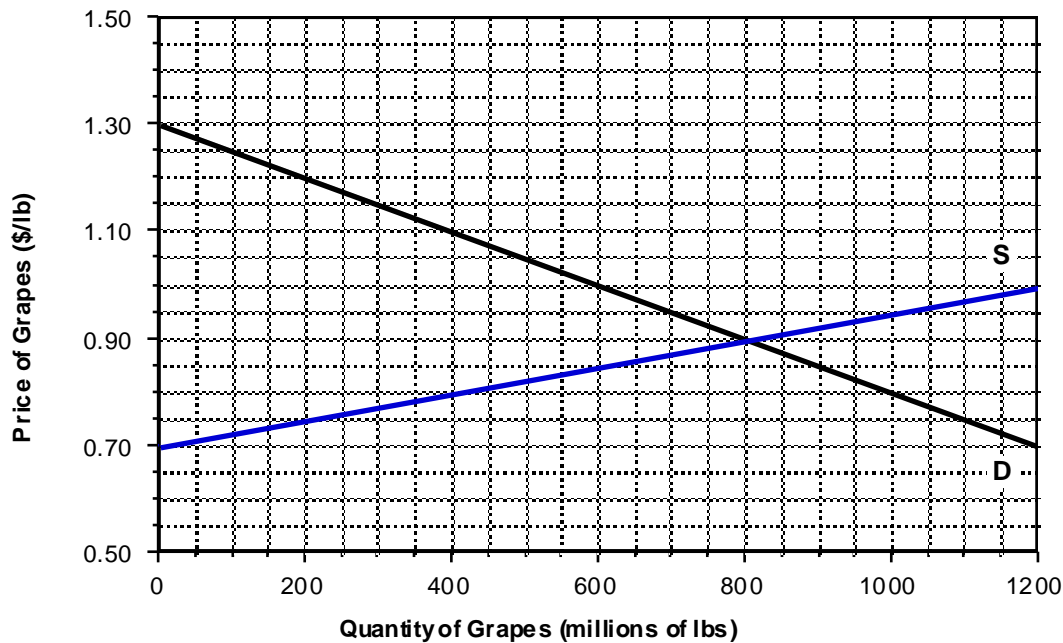
<u>Quantity of Good A</u>	<u>Quantity of Good B</u>	<u>Price of Good A</u>	<u>Price of Good B</u>	<u>Income</u>
10	30	4	8	40,000
11	27	4	9	40,000
12	29	4	9	50,000
11	31	5	9	50,000

- a) Calculate the arc price elasticity of demand for good A. Is demand for good A elastic or inelastic ?
- b) Calculate the arc price elasticity of demand for good B. Is demand for good B elastic or inelastic ?
- c) Calculate the arc income elasticity of demand for good A. Is good A a normal or an inferior good ?
- d) Calculate the arc cross price elasticity of demand for good A. Are goods A and B substitutes or complements ?

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Tutorial Problem Set #4 (Chapter 6-8)

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The market supply and demand for grapes are shown below. Use the graph below to answer the following questions.



- a) What are the price and quantity at the market equilibrium ?
- b) What is the value of consumer surplus at the market equilibrium ?
- c) What is the value of producer surplus at the market equilibrium ?
- d) Suppose the government imposes a 15 cent/lb excise tax on grapes. Show the new supply curve in the diagram and indicate the new equilibrium price and quantity below.

- e) What is the value of consumer surplus at the new equilibrium ?

- f) What is the value of producer surplus at the new equilibrium ?

- g) How much tax revenue does the government receive ?

- h) What is the deadweight loss associated with the tax ?