

## Economics 10: Problem Set 5

1 Assume that labor is the only input in the production of calculators and backpacks in Canada and Japan. The following table gives the output per hour of labor in each country.

Productivity per one hour of labor

	Calculators	Backpacks
Canada	4	6
Japan	3	2

Which country has an absolute advantage in the production of calculators? In backpacks?

**Canada has an absolute advantage in both calculators and backpacks.**

2. a) In Canada, what is the opportunity cost, in terms of calculators, of producing six more backpacks? What is the opportunity cost, in terms of backpacks, of producing 12 more calculators?

**The opportunity cost of 6 more backpacks is 4 calculators, or 0.67 calculators per backpack. The opportunity cost of 12 more calculators is 18 backpacks, or 1.5 backpacks per calculator.**

1. Find these opportunity costs for Japan.

**The opportunity cost of 6 more backpacks is 9 calculators, or 1.5 calculators per backpack. The opportunity cost of 12 more calculators is 8 backpacks or 0.76 backpacks per calculator.**

2. Should each good be produced where its opportunity cost in terms of the other good, is least?

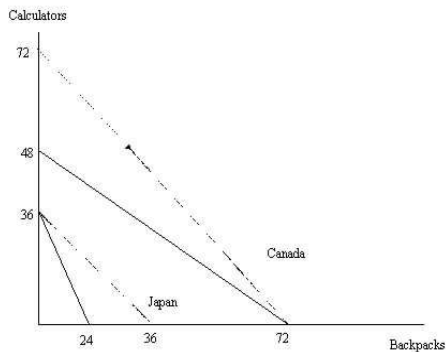
**Yes—this is where it would have a comparative advantage.**

3. Using this information, state which country has the comparative advantage in calculators and which has the comparative advantage in backpacks. Should each country specialize in the good in which it has a comparative advantage?

**Canada has a comparative advantage in producing backpacks. Japan has a comparative advantage is producing calculators. Yes, each country should specialize in producing the good in which it has a comparative advantage. Then with trade each country will expand its potential consumption.**

1. Assume each country has 12 million hours of labor input and that the calculator and backpack industries exhibit constant costs. Also, assume the terms of trade are one calculator for one backpack. For each country, construct two production possibility frontiers (one before trade and one after specialization and trade) on the same graph (see textbook for example).

**Slopes: Before trade After trade (arbitrary choice)**



**Japan  $-3/2 -1$**

**Canada  $-2/3 -1$**

**Note that the slopes of the PPF's before trade are the opportunity cost of backpacks in terms of calculators.**

Are the countries made better off by specializing and trading? Explain.

**After trade the slopes of the consumption possibilities frontiers will reflect the rate of**

**trade of backpacks for calculators determined by the markets in each country. This will be in between the prices or opportunity costs in each country before trade. Here I chose 1 for the slopes of the trade since it is in between  $2/3$  and  $3/2$  and it is convenient.**

- The decline in U.S. manufacturing jobs as a result of import competition has been particularly sharp in automobiles, steel, textiles, and shoes. Suppose you are asked to head a commission to improve the international competitiveness of these industries. What measures would you recommend to help these industries regain their comparative advantages?

**I would argue that there should be no measures taken by the government to aid the industries, including the amount of tariffs and quotas and other support that cause inefficiencies to persist over time. The market forces will make the companies operate efficiently, operate with the lowest opportunity costs and use inputs in their most productive capacity.**

- Firms in the domestic shoe industry argue in favor of shoe import quotas. They point out that a quota will not increase the costs of selling foreign-made shoes in the United States and therefore will not increase the prices of these shoes. Do you agree with their argument? Why/Why not?

**No—and import quota on a product normally reduces the volume of that product traded, raised the price in the importing country and reduces the price in the exporting country.**

- Explain what is meant by the phrase: "Money is a link between the past, present and future." Can you explain how the use of money serves to make the economy operate more smoothly through time.

**Money is a store of value. A farmer would have difficulty saving crops for retirement. Yet he can sell his crops and save money.**

- What is meant by "the demand for money"? Money itself is not eaten, worn, or otherwise consumed; so, except for the miserly joy of running through it in one's bare feet, what gains can there be in *not* spending all the money as soon as it is received?

**Demand for money: people need it for transactions, which increase as the economy grows; people save it for future transactions so they have money**

**when they need it; and people can earn interest on savings.**

6. In 1933, Adolph Hitler decreed that the old German Deutsche-Mark was worthless and could be exchanged at a fixed rate for new Reichsmarks. What circumstances might make it appropriate to withdraw one currency completely from circulation and replace it with a new currency?

**Fiat money has no intrinsic value and acquires its value from the willingness of people to accept it. If its trust is undermined and people refuse to accept it, it will no longer have any value. Replacing something people have lost faith in could be an improvement.**

7. Suppose inflation is expected to heat up in the future. How does inflation affect the function of money as a medium of exchange, standard of value, and store of purchasing power?

**Inflation undermines money as a store of value. By devaluing money people need more of it for their transactions. If inflation gets too high it will undermine the perceived value making it less wanted as a medium of exchange or a standard of value as people will search for other ways of establishing a stable value for transactions.**

8. What is the function of interest rates? Why should a rise in the level of interest rates reduce the demand for money?

**Interest rates represent the opportunity cost of holding money. Any money you hold could be in a savings account earning interest so you forgo that income. Thus the higher the interest rate the higher the opportunity cost and the less people will want to hold money.**

***Essay question from previous examination***

Surprise! You have been named to debate Ross Perot on the merits of NAFTA, even though Congress voted last night. Answer the following two questions about NAFTA and trade in general:

(1) Perot: "If we uns approve that there NAFTA all you're going to hear is a big sucking sound as jobs are drained south of the border. There's nothing good for the working man in freer trade with Mexico." Assuming that Mexico has an absolute advantage in the production of Autos and the U.S. has an absolute advantage in the production of personal computers, show how, if both countries are willing to trade, both will gain. Use the appropriate graphs and explain why Perot is either right or wrong.

(2) Perot: "What we really need are some really strong quotas to protect the American auto worker from that Mexican competition." Show what would happen to prices and quantities of automobiles sold in the U. S. *and in Mexico* if an effective quota on Mexican imports was imposed. Who would benefit in the U. S.? Who would lose? Use graphs and explain your answer.