Chapter 1: Economic Issues and Concepts

Answers to Study Exercises

Question 2

In general, the opportunity cost (measured in dollars) for any activity includes three things:

- the direct (dollar) cost of the activity, plus
- the dollar value of whatever you give up in order to do the activity, minus
- whatever dollar "savings" the activity generates

In this case, the direct cost of transportation, lift tickets and accommodation of $300 is definitely included. The income of $120 that you give up also counts. Finally, we must deal with the restaurant meals of $75. Surely you would have eaten *some* food even if you hadn't gone skiing, so the full $75 is not included. But given the relatively high price of restaurant meals compared to buying your own groceries, you will probably include most of the $75. Thus the opportunity cost of the ski trip is $420 plus some (large) fraction of the $75.

Question 4

In each scenario, one could choose to plot the production possibilities boundary, where the two numbers provided are the two intercepts along the two axes. The slope of the boundary would show the opportunity cost of each door (or each window). Alternatively, one can compare the two *maximum* values, as provided in the question.

a) The factory could produce *either* 1000 windows or 250 doors (or many intermediate combinations). In order to produce one extra door, it must give up 4 (=1000/250) windows. In other words, the opportunity cost of one extra door is 4 windows.

b) The opportunity cost of one extra door is 1 window (=500/500).

c) The opportunity cost of one extra door is 3 windows (=1200/400).

d) The opportunity cost of one extra door is 1.35 windows (=942/697).

e) The opportunity cost of one extra door is 1.33 windows (=600/450).

Question 6

a) At point A, 2.5 tonnes of clothing and 3 tonnes of food are being produced per year. At point B, annual production is 2.5 tonnes of clothing and 7 tonnes of food. At point C, annual production is 6.5 tonnes of clothing and 3 tonnes of food.

b) At point A the economy is either using its resources inefficiently or it is not using all of its available resources. Point B and C represent full and efficient use of available resources because they are on the PPB.

c) At point B, the opportunity cost of producing one more tonne of food (and increase from 7 to 8) is the 2.5 tonnes of clothing that must be given up. The opportunity cost of producing one more tonne of clothing (from 2.5 to 3.5) appears, from the graph, to be approximately 0.75 tonnes of food that must be given up.

d) Point D is unattainable given the economy's current technology and resources. Point D can become attainable with a sufficient improvement in technology or increase in available resources.

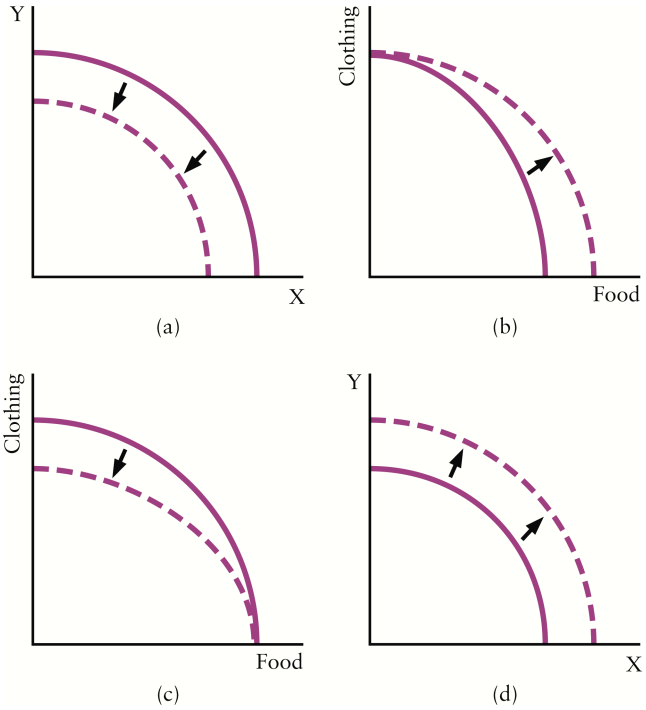
Question 8

a) It doesn't matter how the two axes are labelled in this case; just label them X and Y. The long civil war destroys much of the country's infrastructure and likely reduces the country's ability to produce *all* products. So the PPB shifts inwards, as shown below in part (a) of the figure.

b) The axes are now labelled Food and Clothing. The new technology doubles the maximum amount of food that can be produced, and so shifts the PPB outward in the manner shown in part (b) of the figure. Note that the vertical intercept (maximum amount of clothing) does not change.

c) The axes are again labelled Food and Clothing, as in part (c). In this situation, the earthquake destroys many clothing factories and so shifts the PPB inward, reducing the maximum possible amount of clothing (but leaving unaffected the maximum possible amount of food).

d) The axes are labelled X and Y, as shown in part (d) of the figure. The immigration increases the labour force and increases the country's ability to produce all products. The PPB shifts outward, increasing the maximum possible amounts of both X and Y. Since the new level of immigration is occurring each year, every year will see such an outward shift in the PPB.



Question 10

This question is good for forcing students to think through the computation of opportunity cost and also in showing how the allocation of labour in particular ways can maximize total output.

a) You can catch 6 fish or collect 3 bundles of firewood in one day's work. Thus, your opportunity cost of one additional bundle of firewood is 2 fish. For your friend, the opportunity cost of one additional bundle of firewood is 4 fish.

b) To allocate tasks in the output-maximizing way, each person should do the task for which they have the lower opportunity cost. You have the lower opportunity cost of collecting firewood. Your friend has the lower opportunity cost of catching fish (0.25 of a bundle for your friend as compared to 0.5 of a bundle for you). So for the two of you to collectively maximize output you should specialize in collecting firewood and your friend should specialize in catching fish.

c) What is the total amount of output after two days, if you allocate labour as in part (b)? In two days, you would collect 6 bundles of firewood and your friend would catch 16 fish. The reverse pattern of specialization would yield only 4 bundles of firewood and 12 fish, which is clearly inferior.

Question 12

Microeconomics is the study of the allocation of resources within and across individual markets, and the determination of relative prices and quantities in those specific markets. Little or no attention is paid to the behaviour of the aggregate economy. *Macroeconomics* is the study of the determination of aggregates such as aggregate output, employment, the price level, the unemployment rate, and the exchange rate. When doing macroeconomics, little or no attention is paid to what is going on in the individual markets for specific products.

Question 14

There are two reasons why the specialization of labour is more efficient than self-sufficiency. First, since individual abilities differ, specializing allows each person to focus their energies on what they do best, leaving everything else to be done by others. As a result, total output will rise. Second, as people specialize, they often "learn by doing" and become even better at their specific task. Thus specialization often leads to improvements in ability that would not otherwise occur.

Question 16

Traditional systems: Behaviour is based primarily on tradition, custom, and habit.

Command systems: Decisions about production and consumption are determined by a central planning authority.

Free-market systems: Production and consumption decisions are made privately, by decentralized producers and consumers.

Mixed systems: These economic systems contain elements of tradition, command, and free markets.

Question 18

This quote, if put to a group of students, would stimulate much interesting discussion, not only about views on how alternative economic systems work, but also about the words used to describe them. The term *planned economy*, for example, describes the conscious use of centralized decision making for key economic decisions, but the *results* of that process often look anything but planned, with shortages in some sectors, surpluses in others, and often a rather dispirited and unmotivated private sector. On the other hand, the *unplanned* decentralized market economy—though surely not perfect—creates a much more orderly looking set of outcomes.

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