Dr. Barry Haworth
University of Louisville
Department of Economics
Economics 202-30
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Homework #1 (due by 9:00pm on Tuesday, July 11)

Please submit your answers to this homework through the Assignment link at Blackboard. ***No credit will be given for answers submitted in class or emailed to the professor****, regardless of the excuse.* This includes unique excuses like my dog ate my homework or aliens showed up in my dorm and accidently deleted my homework, as well as more traditional excuses like "I lost my Internet". Please note that all submissions are final, again – regardless of the excuse (which includes "I accidentally hit the submit button"). When you go to Blackboard, you should see that you can save your answers, or "Save and Submit". Use the Save and Submit button to submit your answers. If you are unfamiliar with Blackboard, then it would be a good idea to visit the class page at Blackboard and check out the homework assignments as they are posted.

Please note that when Blackboard grades homework answers, more specifically when Blackboard grades answers to any fill-in-the-blank questions – your answer must match exactly with the answer that Blackboard is looking for. Below, you'll find some instructions on how to properly format these answers. Reading this section is strongly recommended.

Homework Questions 1 and 5
Your answers to question #1 and #5 involve your determining the opportunity cost of producing a certain good. Formatting matters with these two answers. For this reason, **understand that your answer can be technically correct but graded as wrong because you didn't follow the directions provided below.** Given that formatting is considered part of your answer, a wrongly formatted answer is still a wrong answer. Note, however, that there will be at least a little flexibility in formatting (as noted in ii below), but it is your responsibility to find out how much flexibility you've got.

Please note the following comments regarding formatting below.

(i) Your answer in questions 1 and 5 may be expressed as a fraction (reduced to its simplest form) or as a decimal rounded to the nearest tenth. Do not write your answer as a compound fraction or mixed number. E.g., if your answer in questions 1 or 4 is 6/4, then you should reduce that answer to 3/2 or write it as 1.5, but do not write your answer as 6/4 or 1 1/2.

(ii) Whole number answers in questions 1 and 5 may be expressed as a whole number or as a decimal rounded to the nearest tenth. E.g., if your answer in questions 1 or 4 is 5, then you may record your answer as 5 or 5.0.

Homework #1 Questions

1. Assume Costa Rica and United States both produce coffee and crude oil, as per the PPC provided below.

Costa Rica	**A**	**B**	**C**	**D**
Quantity of Coffee	0	20	30	40
Quantity of Crude oil	8	4	2	0

United States	**W**	**X**	**Y**	**Z**
Quantity of Coffee	0	16	40	48
Quantity of Crude oil	30	20	5	0

a. As Costa Rica moves from pt. B to pt. C, the opportunity cost of producing each additional unit of coffee is _____ units of crude oil.

b. As Costa Rica moves from pt. C to pt. B, the opportunity cost of producing each additional unit of crude oil is _____ units of coffee.

c. As United States moves from pt. X to pt. Y, the opportunity cost of producing each additional unit of coffee is _____ units of crude oil.

d. As United States moves from pt. Y to pt. X, the opportunity cost of producing each additional unit of crude oil is _____ units of coffee.

2. Given the tables associated with Question 1 about these two countries, select every correct statement (note: there may be a multiple number of correct statements below).

Note that there is no partial credit on this question – you must get it completely correct, or your answer is incorrect.

(a) Costa Rica has a comparative advantage in producing coffee
(b) Costa Rica has a comparative advantage in producing crude oil
(c) United States has a comparative advantage in producing coffee
(d) United States has a comparative advantage in producing crude oil
(e) Both United States and Costa Rica have a comparative advantage in producing coffee
(f) Both United States and Costa Rica have a comparative advantage in producing crude oil
(g) Neither country has a comparative advantage in producing coffee
(h) Neither country has a comparative advantage in producing crude oil

3. Assume that increases in the productivity associated with producing coffee in the United States leads to a change in their production possibilities. Assume further that this change in productivity does not directly affect Costa Rica.

Costa Rica	**A**	**B**	**C**	**D**
Quantity of Coffee	0	20	30	40
Quantity of Crude oil	8	4	2	0

United States	**W**	**X**	**Y**	**Z**
Quantity of Coffee	0	24	60	72
Quantity of Crude oil	30	20	5	0

Given this change within (only) the United States, which of the following statements about comparative advantage is correct. *Note again, that there may be a multiple number of correct statements below and that there is no partial credit on this question – you must get it completely correct, or your answer is wrong.*

(a) Costa Rica has a comparative advantage in producing coffee
(b) Costa Rica has a comparative advantage in producing crude oil
(c) United States has a comparative advantage in producing coffee
(d) United States has a comparative advantage in producing crude oil
(e) Both United States and Costa Rica have a comparative advantage in producing coffee
(f) Both United States and Costa Rica have a comparative advantage in producing crude oil
(g) Neither country has a comparative advantage in producing coffee
(h) Neither country has a comparative advantage in producing crude oil

4. The PPC model helps us better understand the concept of economic growth within an economy. To answer this question, you'll need to read a Federal Reserve Bank of Dallas article entitled "US Economy: Productivity Growth" by Evan Koenig. The article is provided in the "**Homework #1 material**" folder within "Course Documents" at Blackboard. *Note that there is no partial credit on this question – you must get it completely correct, or your answer is wrong.*

According to this article, what are the three main (underlying) causes of labor productivity growth which are cited in the article:

(a) increases in the amount of capital per worker
(b) increases in the quantity of available public transportation
(c) improvements in technology and the organization of production processes
(d) increases in income
(e) improvements in the quality of the workforce
(f) migration

5. In one period, Country X can either produce 40 units of automobile tires, or 100 units of rubber mats. In the same time period, Country Y can either produce 50 units of automobile tires or 150 units of rubber mats. Given this information, answer both of the following questions below.

(a) As Country X produces more automobile tires, the opportunity cost of each additional unit of tire is _____ units of rubber mats.

(b) As Country Y produces more automobile tires, the opportunity cost of each additional unit of tire is _____ units of rubber mats.

6. Assume that Country X has a production possibilities curve (PPC) for gasoline and heating oil. Note that both of these two final goods are produced through the refining of crude oil. Assume that on any graph of this PPC, it's understood that the quantity of gasoline would be located on the vertical axis and quantity of heating oil on the horizontal axis. Assume further that a series of events take place.

For each of the events below, predict how that event is most likely to affect the PPC of Country X. I.e., you must match each event from the first list below to the most likely effect on the PPC from the second list ("Effect on PPC"). Note that it is possible for one effect to be used more than once.

Event:

a. How does increased unemployment in gasoline production affect this PPC?

b. If Country X remains at full employment when there is decreased Summer demand for heating oil, then how does this lower demand affect the PPC of Country X?

c. How does a decrease in the amount of available inputs used to produce heating oil affect the PPC of Country X?

d. How does a significant decrease in the productivity associated with producing both gasoline and heating oil within Country X affect the PPC of Country X?

e. How does having technological improvements in the production of heating oil affect the PPC of Country X?

f. If natural disasters within Country X lead to a decrease in the capital stock of all gasoline and heating oil firms within Country X, then how is the PPC of Country X affected?

g. If improved expectations about the future lead to a decrease in unemployment associated with both gasoline and heating oil in Country X, then how does this event affect Country X's PPC?

h. If changes in immigration laws within Country X lead to an increase in migration into Country X (e.g. from Country W), then how is the PPC of Country X affected?

(Question 6 continued on next page)

Effect on PPC:

A. Movement from a point inside this PPC to a point that's on the PPC

B. Movement from a point that's on this PPC to a point inside the PPC

C. Movement between 2 points, up along the PPC (i.e. toward gasoline)

D. Movement between 2 points, down along the PPC (i.e. toward heating oil).

E. Increase (shift outward) in the PPC that affects both goods

F. Decrease (shift inward) in the PPC that affects both goods

G. Increase (pivot outward) in the PPC that affects only gasoline

H. Increase (pivot outward) in the PPC that affects only heating oil

I. Decrease (pivot inward) in the PPC that affects only gasoline

J. Decrease (pivot inward) in the PPC that affects only heating oil