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Department of Economics
Economics 202
Spring 2026

Homework #1 (due by 9:00pm on Friday, January 23)

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, but also 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"). You will get whatever score is assigned to you by Blackboard. 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 answers to the fill-in-the-blank questions – your answer must match exactly with the answer that Blackboard is looking for or your answer will be considered incorrect. You'll always be given formatting instructions and you must follow those instructions. Below, you'll find some instructions on how to properly format your answers to these type of questions. A more complete discussion of these rules is provided at Blackboard. Reading that section is strongly recommended.

As stated above, given that answers to the fill-in-the-blank questions must not only be correct, but formatted properly, correct formatting is part of the process. A wrongly formatted answer is still a wrong answer. I.e., you will not have points added to your homework score if you got answers wrong due to formatting mistakes. However, this is still something you will want to bring to Professor Haworth's attention. *In addition, if you are unsure how to round an answer (e.g. whether 3.25 rounds to 3.2 or 3.3), then please contact Professor Haworth.*

Homework #1 formatting instructions:

(a) ***Questions 1 and 3:*** *your answer to these questions can be expressed in either one of the following two formats:*

- *You can express your answer as a fraction (reduced to its simplest form).*
- *As a decimal rounded to the nearest tenth.*

E.g., if you calculate an answer of 6/4, then you must simplify that answer to 3/2 or 1.5. Recording your answer as 6/4 or 1 1/2 would be incorrect. If you calculate a whole number answer of 4, then you may record that answer as 4 or 4.0, but do not round a number like 4.1 to 4 or 4.0 (i.e. leave an answer of 4.1 as 4.1).

Homework #1 Questions

1. Assume that India and Russia both produce wheat and soybeans, as per the PPC provided below.

India	**A_1**	**A_2**	**A_3**	**A_4**
Quantity of Wheat	0	140	280	350
Quantity of Soybeans	250	150	50	0

Russia	**B_1**	**B_2**	**B_3**	**B_4**
Quantity of Wheat	0	210	420	630
Quantity of Soybeans	270	180	90	0

a. As India moves from pt. A_2 to pt. A_3, the opportunity cost of producing each additional unit of wheat is _______ units of soybeans.

b. As India moves from pt. A_3 to pt. A_2, the opportunity cost of producing each additional unit of soybeans is _______ units of wheat.

c. As Russia moves from pt. B_2 to pt. B_3, the opportunity cost of producing each additional unit of wheat is _______ units of soybeans.

d. As Russia moves from pt. B_3 to pt. B_2, the opportunity cost of producing each additional unit of soybeans is _______ units of wheat.

2. Assume that Cuba and Venezuela both produce (only) oil and sugar cane, and that the opportunity cost associated with producing these goods in each country is as follows:

Cuba:
The opportunity cost of producing each additional unit of sugar cane is 0.7 units of oil
The opportunity cost of producing each additional unit of oil is 1.4 units of sugar cane

Venezuela:
The opportunity cost of producing each additional unit of sugar cane is 0.3 units of oil
The opportunity cost of producing each additional unit of oil is 3.0 units of sugar cane

Given the information above, which of the following is a correct statement:

(a) Cuba has a comparative advantage in producing sugar cane and Venezuela has the comparative advantage in producing oil

(b) Cuba has a comparative advantage in producing oil and Venezuela has the comparative advantage in producing sugar cane

(c) Cuba has a comparative advantage in producing both sugar cane and oil

(d) Venezuela has a comparative advantage in producing both sugar cane and oil

Questions 3 and 4 relate to the PPC associated with Argentina and Brazil, where both countries produce cotton and corn. In Question 3, you will calculate the opportunity cost associated with producing each good, and then in Question 4, you will report who has the comparative advantage in producing each good (if anyone).

3. In one period, assume that Argentina can either produce 60 units of cotton, or 90 units of corn, and Brazil can either produce 70 units of cotton or 110 units of corn. Given this information, answer each of the following questions below *(note: round your answers to the nearest tenth)*.

Argentina:

(a) The opportunity cost of producing each additional unit of cotton is ______ units of corn

(b) The opportunity cost of producing each additional unit of corn is ______ units of cotton

Brazil:

(c) The opportunity cost of producing each additional unit of cotton is ______ units of corn.

(d) The opportunity cost of producing each additional unit of corn is ______ units of cotton

4. Given the information from Question 3 (above) about Argentina and Brazil, select the statement which correctly assigns the comparative advantage we will observe with these countries.

(a) Argentina has a comparative advantage in producing corn and Brazil has a comparative advantage in producing cotton

(b) Argentina has a comparative advantage in producing cotton and Brazil has a comparative advantage in producing corn

(c) Brazil has the comparative advantage in producing both cotton and corn

(d) Argentina has the comparative advantage in producing both cotton and corn

(e) Brazil has a comparative advantage in producing cotton, but neither country has a comparative advantage in producing corn

(f) Brazil has a comparative advantage in producing corn, but neither country has a comparative advantage in producing cotton

(g) Argentina has a comparative advantage in producing cotton, but neither country has a comparative advantage in producing corn

(h) Argentina has a comparative advantage in producing corn, but neither country has a comparative advantage in producing cotton

5. Below, is PPC 1, which illustrates the production possibilities of Canada, a country that we will assume produces (only) automobiles and petroleum.

PPC 1

Canada	**A**	**B**	**C**	**D**
Quantity of Automobiles	0	160	240	320
Quantity of Petroleum	280	140	70	0

Assume that an increase in productivity within Canada allows this country to double their output of petroleum and that Canada now has a new set of production possibilities for automobiles and petroleum illustrated within this new PPC, PPC 2, below.

PPC 2

Canada	**A**	**B**	**C**	**D**
Quantity of Automobiles	0	160	240	320
Quantity of Petroleum	560	280	140	0

Compare the two PPC tables above, but most importantly, consider how the opportunity cost of producing each good may change as we move from PPC 1 to PPC 2.

Once you have done this, indicate which of the following statements below is correct:

(a) the opportunity cost of producing petroleum will decrease but there will be no change in the opportunity cost of producing automobiles

(b) the opportunity cost of producing petroleum will increase and the opportunity cost of producing automobiles will decrease

(c) the opportunity cost of producing petroleum will decrease and the opportunity cost of producing automobiles will increase

(d) the opportunity cost of producing automobiles will increase but there will be no change in the opportunity cost of producing petroleum

(e) the opportunity cost of producing both petroleum and automobiles will decrease

(f) none of the above

To answer the question below, you'll need to access an article called "US Economy: Productivity Growth". This file is posted within the Homework #1 folder at Blackboard. If you navigate your way to the Homework #1 folder, then click on the Homework #1 material folder, you'll find this article.

6. According to this article, what are the three main (underlying) causes of labor productivity growth which are cited in the article. *Select every correct answer below and note that there are multiple correct answers to this question.*

(a) increases in income

(b) increases in the quantity of available public transportation

(c) improvements in technology and the organization of production processes

(d) increases in the amount of capital per worker

(e) improvements in the quality of the workforce

(f) migration

To answer the question below, you'll need to access an article called "Labor Productivity and Economic Growth". This file is posted within the Homework #1 folder at Blackboard. If you navigate your way to the Homework #1 folder, then click on the Homework #1 material folder, you'll find this article.

7. Which of the following points does this article make labor productivity and economic growth (note that there can be 1 or more correct answers here). *Note that there is no partial credit on this question – you must get it completely correct, or your answer is wrong.*

(a) The main determinants of labor productivity are physical capital, human capital, and technological change.

(b) Physical capital is affected by changes in the quantity of capital, but changes in the quality of capital affect human capital, not physical capital.

(c) The economy's aggregate production function is only affected by changes in technology.

(d) Technological change not only includes new ways of organizing work, but also includes a combination of invention and innovation.

(e) Increases in the quantities of physical capital, human capital and technology per person lead to a higher standard of living over time.

(f) Increases in human capital per person can affect GDP, but not GDP per capita.

Multiple choice questions #8-16 all draw from the following information below.

Assume that the country of Kenya has a production possibilities curve (PPC) that reflects this country's production of coffee and apparel, two goods where Kenya is an exporter on the world market. Although we don't need to make this assumption, let's still just assume their PPC has coffee on the vertical axis and apparel on the horizontal axis.

In Questions #8-16 below, you must predict the effect of each individual event on the PPC of Kenya by selecting the most likely effect from the set of answer responses below each question.

8. Assume that political unrest leads to a significant number of Kenyan citizens migrating out of Kenya and into a neighboring country. How does this event affect the PPC of Kenya?
a. Increase (shift outward) in the PPC that affects both goods
b. Decrease (shift inward) in the PPC that affects both goods
c. No shift, but movement from a point that's on this PPC to a point inside the PPC
d. No shift, but movement from a point inside this PPC to a point that's on the PPC
e. No shift, but movement between 2 points, up along the PPC (i.e. producing more apparel)
f. No shift, but movement between 2 points, down along the PPC (i.e. producing more coffee)
g. none of the above

9. Assume there is an increase in the unemployment associated with producing coffee and apparel within Kenya. How does this event affect the PPC of Kenya?
a. Increase (shift outward) in the PPC that affects both goods
b. Decrease (shift inward) in the PPC that affects both goods
c. Decrease (shift inward) in the PPC that affects only apparel
d. Decrease (shift inward) in the PPC that affects only coffee
e. No shift, but movement from a point that's on this PPC to a point inside the PPC
f. No shift, but movement from a point inside this PPC to a point that's on the PPC
g. none of the above

10. Assume there is an increase in productivity that affects (only) apparel. How does this event affect the PPC of Kenya?
a. Increase (shift outward) in the PPC that affects both goods
b. Decrease (shift inward) in the PPC that affects both goods
c. No shift, but movement from a point that's on this PPC to a point inside the PPC
d. No shift, but movement from a point inside this PPC to a point that's on the PPC
e. No shift, but movement between 2 points, up along the PPC (i.e. producing more apparel)
f. No shift, but movement between 2 points, down along the PPC (i.e. producing more coffee)
g. none of the above

11. Assume that an international program designed to help African countries with economic development leads to a dramatic increase in the capital stock within Kenya. How does this event affect the PPC of Kenya?
a. Increase (shift outward) in the PPC that affects both goods
b. Decrease (shift inward) in the PPC that affects both goods
c. Decrease (shift inward) in the PPC that affects only apparel
d. Decrease (shift inward) in the PPC that affects only coffee
e. No shift, but movement from a point that's on this PPC to a point inside the PPC
f. No shift, but movement from a point inside this PPC to a point that's on the PPC
g. none of the above

12. Assume that when Kenya is producing at full employment, there is an increase in the demand for coffee. How does this event affect the PPC of Kenya?
a. Increase (shift outward) in the PPC that affects only apparel
b. Increase (shift outward) in the PPC that affects only coffee
c. No shift, but movement from a point that's on this PPC to a point inside the PPC
d. No shift, but movement from a point inside this PPC to a point that's on the PPC
e. No shift, but movement between 2 points, up along the PPC (i.e. producing more apparel)
f. No shift, but movement between 2 points, down along the PPC (i.e. producing more coffee)
g. none of the above

13. Assume that an international incident leads to a decrease in Kenya's ability to access the inputs used to produce apparel. How does this event affect the PPC of Kenya?
a. Increase (shift outward) in the PPC that affects both goods
b. Decrease (shift inward) in the PPC that affects both goods
c. Decrease (shift inward) in the PPC that affects only apparel
d. Decrease (shift inward) in the PPC that affects only coffee
e. No shift, but movement from a point that's on this PPC to a point inside the PPC
f. No shift, but movement from a point inside this PPC to a point that's on the PPC
g. none of the above

14. Assume that advances in robotics leads to technological change that favorably impacts the production of all goods within Kenya. How does this event affect the PPC of Kenya?
a. Increase (shift outward) in the PPC that affects both goods
b. Decrease (shift inward) in the PPC that affects both goods
c. No shift, but movement from a point that's on this PPC to a point inside the PPC
d. No shift, but movement from a point inside this PPC to a point that's on the PPC
e. No shift, but movement between 2 points, up along the PPC (i.e. producing more apparel)
f. No shift, but movement between 2 points, down along the PPC (i.e. producing more coffee)
g. none of the above

15. Assume that there is a decrease in the productivity associated with producing coffee. How does this event affect the PPC of Kenya?
a. Increase (shift outward) in the PPC that affects both goods
b. Decrease (shift inward) in the PPC that affects both goods
c. Decrease (shift inward) in the PPC that affects only apparel
d. Decrease (shift inward) in the PPC that affects only coffee
e. No shift, but movement from a point that's on this PPC to a point inside the PPC
f. No shift, but movement from a point inside this PPC to a point that's on the PPC
g. none of the above

16. Assume that changes within Kenya lead to a decrease in Kenya’s unemployment within both the coffee and apparel industries. How does this event affect the PPC of Kenya?
a. Increase (shift outward) in the PPC that affects both goods
b. Decrease (shift inward) in the PPC that affects both goods
c. Decrease (shift inward) in the PPC that affects only apparel
d. Decrease (shift inward) in the PPC that affects only coffee
e. No shift, but movement from a point that's on this PPC to a point inside the PPC
f. No shift, but movement from a point inside this PPC to a point that's on the PPC
g. none of the above