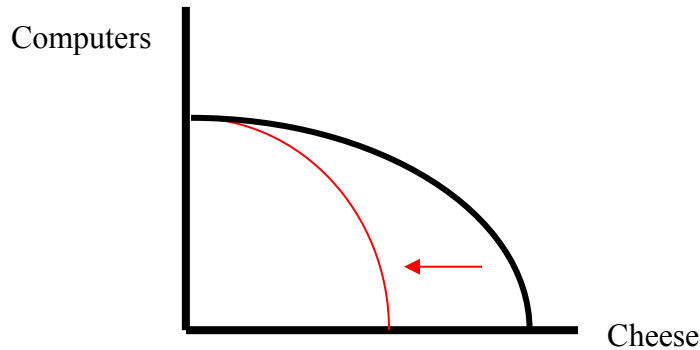


## CH 2 Sample Exam Problems and Answers

1. The graph below shows the PPF for computers and cheese in the USA. Suppose some of the US dairy farmers decide to migrate to Switzerland. Draw a new PPF that reflects this change.



Answer: the PPF shifts inward along the x-axis.

2. Which of the following is a positive economic statement?

- A) Tim Berg was the top DJ in the world.
- B) *Fade into Darkness* was Avicii's best song.
- C) Levels has over 25,000,000 views on YouTube.
- D) "Oh oh sometimes I get a good feeling" is the best part of *Levels*.

3. This term refers to the specific components that are left out of (not determined within) a model.

- A) endogenous
- B) exogenous
- C) caveat emptor
- D) ceteris paribus

4. If society decreases its savings rate, the current production possibilities curve will

- A) remain the same.
- B) shift out, more than in the past.
- C) shift out during expansions, and in during contractions.
- D) shift in.

5. If a nation has a high unemployment rate, what will happen to the production possibilities frontier?

- A) The nation will slide down along the curve.
- B) The curve will shift in.
- C) The curve will shift out.
- D) None of the above is correct.

**6. The Production Possibilities Frontier is bowed out because of**

- A) the Law of Decreasing Opportunity Cost
- B) the fact that every point on the PPC is efficient
- C) the Law of Increasing Opportunity Cost
- D) inefficiencies in production

**7. When someone wishes to invest in more capital goods, it is usually true that**

- A) there will be fewer consumer goods available to her in the future
- B) there are no opportunity costs involved in this
- C) she must give up some consumer goods in the present
- D) she will operate inefficiently.

**8. If a society saves less now than in the past, then the production possibilities curve will over time**

- A) shift in.
- B) shift out but not as much as in the past.
- C) shift out more than in the past.
- D) shift in during recessions, and out during expansions.

**9. What is the opportunity cost of taking an exam?**

- A) All of things that you could have done by not studying.
- B) Each of the questions that you miss on the exam.
- C) The highest valued alternative that you gave up preparing for and attend the exam.
- D) The money you spent to buy the textbook, redacted notes, and all the other materials you used to study with.

**10. You are considering going to LA to visit friends. A round trip plane ride takes 3 hours round trip and costs \$400. A round trip bus ride takes 15 hours and costs \$100. At what hourly rate would you be indifferent between taking the bus and the plane?**

**Answer:** You save \$300 at a cost of 12 hours.  $\$300/12 = \$25/\text{hour}$

**11. Given the following production table, and the law of comparative advantage we discussed in class, which assignment of duties makes the most sense?**

| Tony | Manny |
|------|-------|
|------|-------|

| Cakes | Kilos of Yeyo | Cakes | Kilos of Yeyo |
|-------|---------------|-------|---------------|
| 0     | 8             | 0     | 12            |
| 2     | 6             | 1     | 9             |
| 4     | 4             | 2     | 6             |
| 6     | 2             | 3     | 3             |
| 8     | 0             | 4     | 0             |

- A) Tony and Manny should each split their time between baking cakes and making yeyo.
- B) Tony should do the baking and Manny should make the yeyo.
- C) Manny should do the baking and Tony should make the yeyo.
- D) Drugs are bad, so they should both stick to baking cakes.

**12. According to the law of comparative advantage, a particular task is performed most efficiently by the individual with the lowest**

- A) wage rate.
- B) tax liability.
- C) net worth.
- D) opportunity cost.

**13. Comparative advantage implies that you will**

- A) produce at the highest opportunity cost.
- B) produce a good using the most inputs.
- C) produce a good only when demand is high
- D) produce a good where you have the lowest opportunity cost.

**14. Your friend offers you a free ticket to the next home UT football game. On the same date and at the same time, Post Malone is playing in Austin. The Post Malone tickets are \$45 but you would have been willing to pay \$75. If there are no costs of getting to either place, what is the opportunity cost of going to the UT game?**

- A) \$ 0.00
- B) \$ 30.00
- C) \$ 45.00
- D) \$ 75.00

**15. Use the following information to answer the questions below.**

Suppose that Oscar and Felix are roommates, and they want to find a way to divide up household chores—cooking meals and doing laundry. It takes Oscar 45 minutes to make a meal and 90 minutes to do a load of laundry. It takes Felix 60 minutes to make a meal and 60 minutes to do a load of laundry.

**(a) Who has the absolute advantage in making meals?**

**Answer:** Because Oscar takes less time to make a meal than Felix (45 minutes vs. 60 minutes), Oscar has the absolute advantage in making meals.

(b) Oscar's opportunity cost of doing a load of laundry is 2 meals.

(c) Felix's opportunity cost of doing a load of laundry is 1 meals.

**Answer for (b) and (c):** It takes 90 minutes for Oscar to do a load of laundry. In that time, he could have made two meals (90:45). Therefore, Oscar's opportunity cost of one load of laundry is two meals. It would take 60 minutes for Felix to do a load of laundry. In that time, he could have made one meal (60:60). Therefore, Felix's opportunity cost of one load of laundry is one meal.

(d) If Oscar and Felix want to specialize, Oscar should \_\_\_\_\_ and Felix should \_\_\_\_\_.

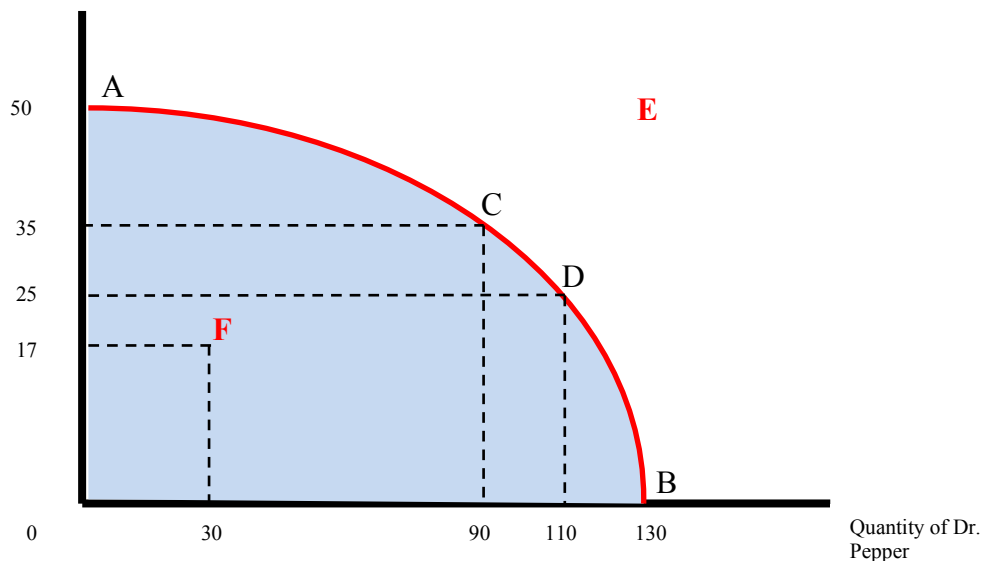
**Answer:** Each roommate should specialize in the good for which he has the lowest opportunity cost. Felix should do the laundry because he would give up making only one meal, but Oscar would give up two meals. Because Felix does the laundry, Oscar should cook the meals.

(e) If Oscar and Felix trade, one load of laundry should trade for more than \_\_\_\_\_ meal(s) but fewer than \_\_\_\_\_ meal(s).

**Answer:** The terms of trade depend on each person's opportunity cost. For trade to be mutually beneficial, the price of one load of laundry should fall between each person's opportunity cost. Therefore, the price of one load of laundry should be between one and two meals.

Use the following production possibilities curve for questions (16) and (17)

Quantity of brisket



16. What is the opportunity cost of moving from point A to point C? 15 brisket

17. Point D is efficient / inefficient / not possible. (Circle one)

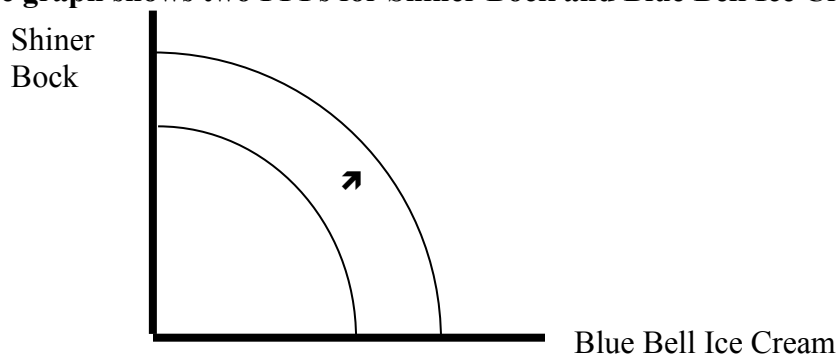
18. Kygo and Selena Gomez spend their time writing music or cleaning windows. Kygo and Selena wish to complete these tasks as quickly as possible. The production possibilities for them are given in the table:

| Kego        |               | Selina      |               |
|-------------|---------------|-------------|---------------|
| Write music | Clean windows | Write music | Clean windows |
| 0           | 24            | 0           | 12            |
| 3           | 18            | 2           | 9             |
| 6           | 12            | 4           | 6             |
| 9           | 6             | 6           | 3             |
| 12          | 0             | 8           | 0             |

Which of the following statements is true? (Check the correct box.)

- ☐ Kygo has an absolute advantage in both tasks, so he should do both.
- ☐ Kygo should write music and Selena should clean windows.
- ☐ Selena should write music and Kygo should clean windows.

19. The graph shows two PPFs for Shiner Bock and Blue Bell Ice Cream.

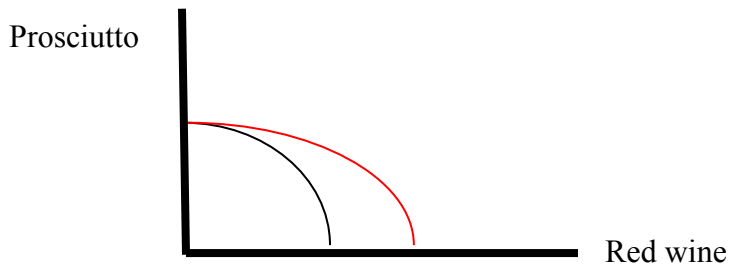


Name three ways to shift the entire PPF out:

\_\_\_\_\_

Possible answers: better technology, more resources (such as labor, capital, time), temporarily working harder than you can sustain in the long run.

20. The graph shows a PPFs for prosciutto and red wine.



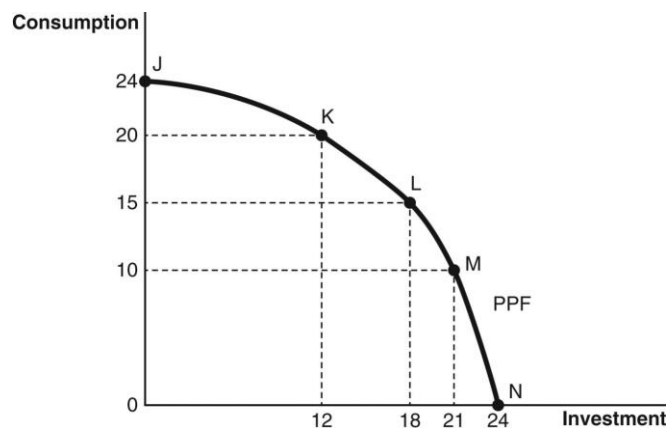
Answer: The PPF shifts outward along the x-axis.

Illustrate on the graph above what the new PPF will look like if a new technology is developed that makes it easier to produce red wine.

21. What's the point of Jason Momoa having bodyguards? (He is big and strong enough to defend himself.)

- A) Trade-offs
- B) Opportunity cost
- C) Comparative advantage
- D) Incentives

22. Refer to the following graph.



The opportunity cost of increasing investment from 18 to 21 is \_\_\_\_\_.

- A) 3 investment
- B) 5 consumption
- C) 3 investment and 5 consumption

- D) 18 investment
- E) 15 consumption

**23. How will a reduction in the national unemployment rate affect a nation's production possibilities frontier (PPF)?**

- A) It will cause the PPF to shift inward.
- B) It will cause the PPF to shift outward.
- C) It will move society inward, to a point farther away from the PPF.
- D) It will push total production closer to or on the PPF.**
- E) It will push total production outward to a point outside the PPF.

**24. Tom and Geraldine want to finish the chores so they can spend their time hiking. Given the production possibilities in the table:**

| Tom           |              | Geraldine     |              |
|---------------|--------------|---------------|--------------|
| Do the dishes | Mow the lawn | Do the dishes | Mow the lawn |
| 0             | 8            | 0             | 12           |
| 3             | 6            | 5             | 9            |
| 6             | 4            | 10            | 6            |
| 9             | 2            | 15            | 3            |
| 12            | 0            | 20            | 0            |

**Which of the following statements is true?**

- A) Tom should mow the lawn and do the dishes.
- B) Geraldine should mow the lawn and do the dishes.
- C) Geraldine should mow the lawn and do the dishes.
- D) Tom should mow the lawn and Geraldine should do the dishes.**
- E) Geraldine should mow the lawn and Tom should do the dishes.

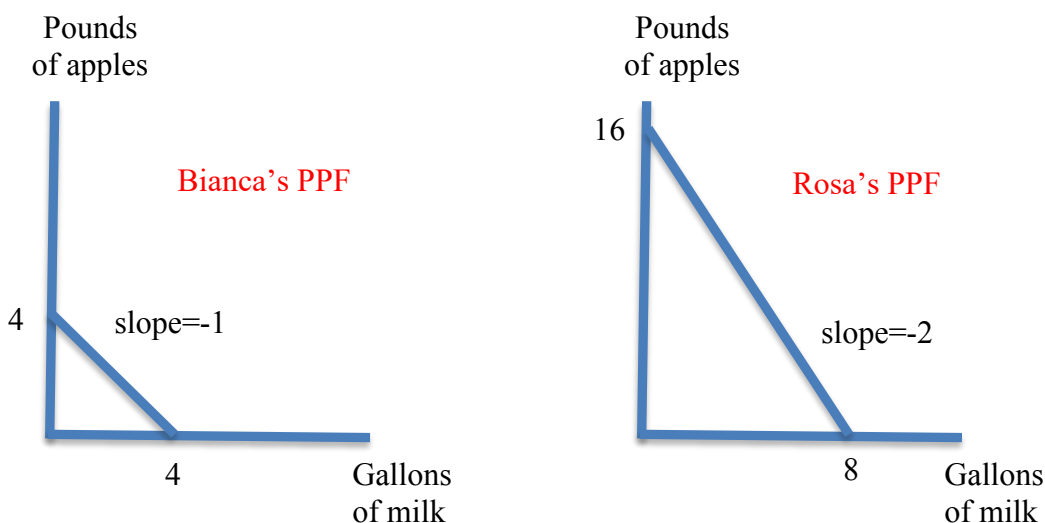
**25. You are considering going from El Paso to Dallas to visit friends. A round trip plane ride takes 3 hours and costs \$300. A round trip bus ride takes 25 hours and costs \$100. At what hourly rate would you be indifferent between taking the bus and the plane?**

- A) \$10.00/hour
- B) \$ 9.09/hour**
- C) \$11.11/hour
- D) \$ 8.00/hour

**26. Suppose that Bianca and Rosa each own a small farm. They both produce milk and apples. Each hour, Bianca can either produce 1 gallon of milk or 1 pound of apples, and Rosa can either produce 2 gallons of milk or 4 pounds of apples. Each works 4 hours a day.**

- a. Draw Bianca's daily PPF, placing gallons of milk x-axis and pounds of apples on the y-axis. Label the x-intercept, the y-intercept and the slope of the PPC. Be sure to also label your axes. **See below.**
- b. Draw Rosa's daily PPF, placing gallons of milk x-axis and pounds of apples on

the y-axis. Label the x-intercept, the y-intercept and the slope of the PPC. Be sure to also label your axes. [See below.](#)

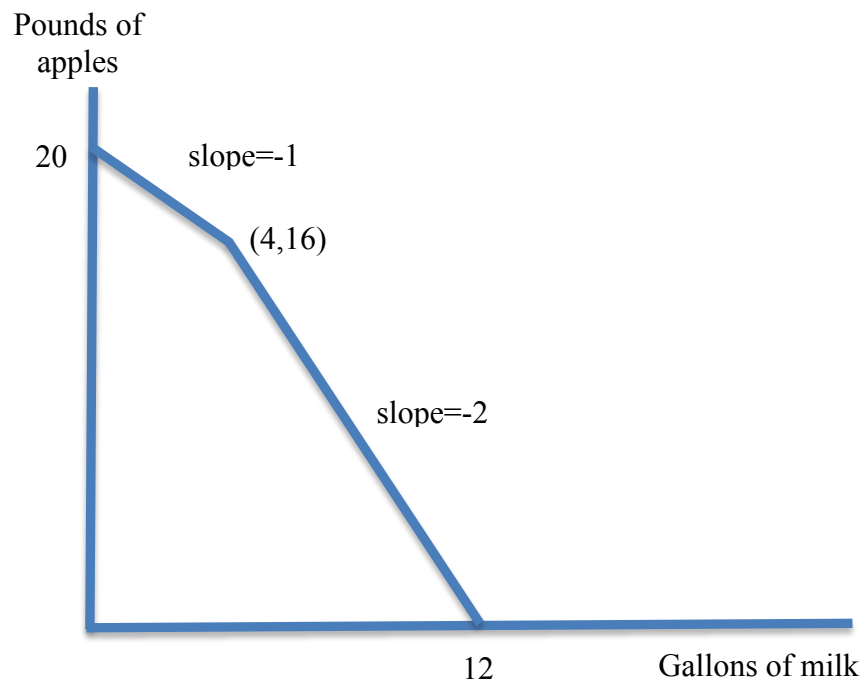


- c. What is the opportunity cost to each of 1 pound of apples?  
For Bianca, the OC of 1 pound of apples is 1 gallon of milk. For Rosa, the OC of 1 pound of apples is  $\frac{1}{2}$  of a gallon of milk.
- d. What is the opportunity cost to each of 1 gallon of milk?  
For Bianca, the OC of 1 gallon of milk is 1 pound of apples. For Rosa, the OC of 1 gallon of milk is 2 pounds of apples.
- e. Who has the comparative advantage in producing apples? Briefly explain.  
Rosa has the CA in the production of apples because her OC of apples is lower than Bianca's.
- f. Who has the comparative advantage in producing milk? Briefly explain.  
Bianca has the CA in the production of milk because her OC of milk is lower than Rosa's.
- g. Who has the absolute advantage in producing milk? Briefly explain.  
Rosa has the AA in the production of milk because it takes her less time to produce a gallon of milk than Bianca (or, equivalently, Rosa can produce more gallons of milk per hour than Bianca).
- h. Who has the absolute advantage in producing apples? Briefly explain.  
Rosa has the AA in the production of apples because it takes her less time to produce apples than Bianca (or, equivalently, Rosa can produce more pounds of apples per hour than Bianca).
- i. Are there gains from specialization and trade in this case? If not, explain why not. If so, in which good should each specialize?



Yes. There are gains from specialization and trade. Rosa should specialize in the production of apples and Bianca should specialize in the production of milk.

- j. Draw the joint PPC for Bianca and Rosa, placing gallons of milk on the x-axis and pounds of apples on the y-axis. Be sure to label, the x-intercept, the y-intercept, the slope along each segment of the PPC and the point at which each is specializing in the activity at which he or she has a comparative advantage. Be sure to also label your axes.



- k. Suppose that every day, Bianca and Rosa each spend 2 hours producing milk and 2 hours producing apples, so that together they produce 6 gallons of milk and 10 pounds of apples. To show that this is not an efficient use of their time, find another way to divide up their time between producing milk and producing apples so that together they still can produce 6 gallons of milk but more than 10 pounds of apples.

If Bianca spends 4 hours a day producing milk and Rosa spends 1 hour a day producing milk and 3 hours a day producing apples, then together they can have 6 gallons of milk and 12 pounds of apples.

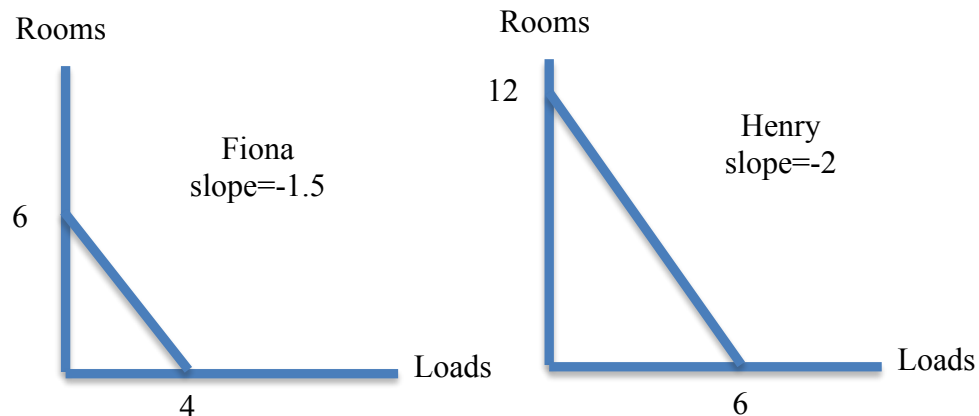
**27. Suppose that two siblings, Fiona and Henry, are required to help their parents around the house. Each week they are required to spend an hour vacuuming and folding laundry. Suppose it takes Fiona 10 minutes to vacuum a room and 15 minutes to fold a load of laundry, while it takes Henry 5 minutes to vacuum a room and 10 minutes to fold a load of laundry.**

- a. Draw Fiona's weekly PPF (assuming she spends an hour each week doing housework), placing loads of laundry on the x-axis. Label the x-intercept, the y-intercept and the slope of the PPF. Be sure to also label your axes.

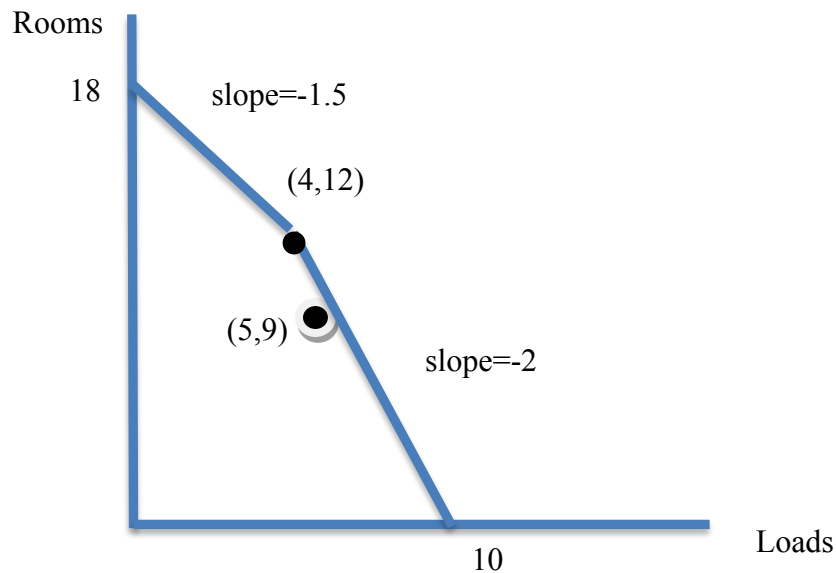
- b. Draw Henry's weekly PPF (assuming he spends an hour each week doing housework), placing loads of laundry on the x-axis. Label the x-intercept, the y-intercept and the slope of the PPF. Be sure to also label your axes.
- c. What is the opportunity cost to each of folding laundry?
- d. What is the opportunity cost to each of vacuuming?
- e. Who has the comparative advantage in vacuuming? Why?
- f. Who has the comparative advantage in folding laundry? Why?
- g. Draw the joint PPF for Henry and Fiona. Be sure to label, the x-intercept, the y-intercept, the slope along each segment of the PPF and the point at which each is specializing completely in doing the activity at which he or she has a comparative advantage. Be sure to also label your axes.
- h. Suppose their parents insist that each spend 30 minutes vacuuming and 30 minutes folding laundry. Label the corresponding point on the joint PPF. Is this an efficient use of Fiona's and Henry's time? Explain.

a. [See below.](#)

b. [See below.](#)



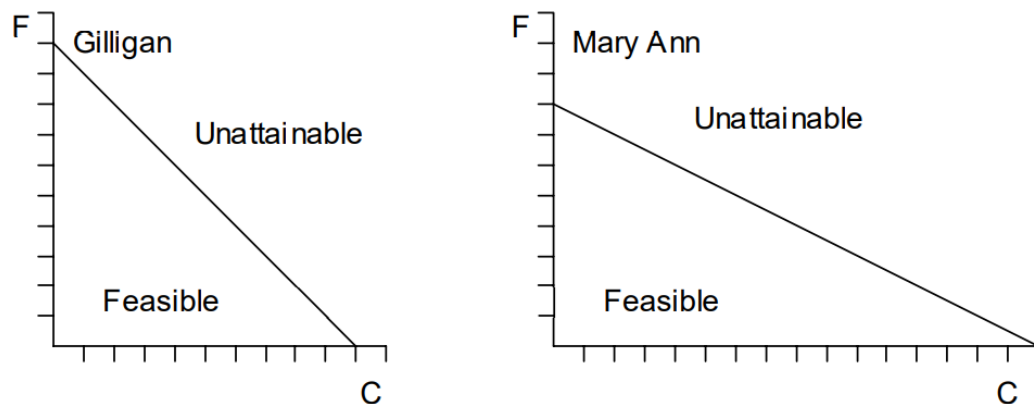
- c. [Fiona: 1.5 rooms. Henry: 2 rooms.](#)
- d. [Fiona: 2/3 of a load of laundry. Henry: 1/2 a load of laundry.](#)
- e. [Henry has a CA in vacuuming because her OC is lower is lower than Fiona's.](#)
- f. [Fiona has a CA in folding laundry because her OC is lower than Henry's.](#)
- g. [See below.](#)
- h. [In this case, Fiona can vacuum 3 rooms and fold 2 loads, while Henry can vacuum 6 rooms and fold 3 loads. So, this is the point \(5, 9\). See below. No, this is not an efficient use of their time. This point is on the interior of the PPF—that is, if both specialized in producing the good in which they have a CA, they could increase the total amount of housework they are able to do in an hour.](#)



28. There are two small islands, each with a single inhabitant. The first is inhabited by the Gilligan and the second by Mary Ann. The castaways can either gather coconuts or fish in the ocean. Each has a linear trade-off between the productivity of two activities that can be expressed as a PPF. Gilligan's PPF  $F = -C + 10$  Mary Ann's PPF  $F = -(1/2)C + 8$  where  $F$  is the number of fish caught per day and  $C$  is the number of coconuts harvested per day.

- Draw each individual's PPF on its own set of axis. Put fish on the vertical axis. Indicate the feasible set, the efficient and feasible set and the unattainable set of fish and coconuts.

ANSWER:



- Who has comparative advantage in fish catching? What about in coconut gathering? Is this relationship always true for two-person exchange economies?

ANSWER: Recall from above that the opportunity cost of catching a fish (the good on the y-axis) is given by the reciprocal of the absolute value of the slope.

The opportunity cost of Gilligan catching an additional fish is 1 coconut. The opportunity cost of Mary Ann catching an additional fish is 2 coconuts. Gilligan has the lower opportunity cost, and thus, a comparative advantage in catching fish. The opportunity cost for gathering coconuts (the good on the x-axis) is just the absolute value of the slope of the PPFs. Thus, Gilligan's opportunity cost of gathering an additional coconut is 1 fish and Mary Ann's opportunity cost is  $\frac{1}{2}$  fish. Mary Ann has the lower opportunity cost, and thus, a comparative advantage in coconut gathering. As was noted above, if we are in a two-person setting, each person will have comparative advantage in one of the two goods unless the slopes of their PPF are the same.

- c. Are there gains to be had from trading? What would each have to do to take advantage of those potential gains?

ANSWER: Since Gilligan has comparative advantage in catching fish, he should spend all his time catching fish. To take advantage of those gains they need to specialize in the production of the good which each individual has a comparative advantage.