

Name: _____ Section: _____

Date assigned: Monday, 8/31

Date due: Friday, 9/4

Instructions:

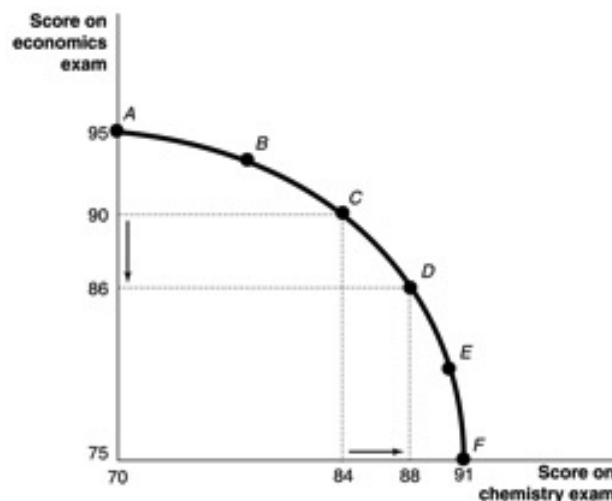
- This problem set has three questions, for a total of 12 points.
- Please answer the questions on separate pieces of paper. Turn the pieces of paper in, stapled, with your name written on top.

1: Question 1.10 from Textbook (5 points)

You have exams in economics and chemistry coming up, and you have 5 hours available for studying. The following table shows the trade-offs you face in allocating the time you will spend studying for each subject:

Hours Spent Studying			Midterm Score	
Choice	Economics	Chemistry	Economics	Chemistry
A	5	0	95	70
B	4	1	93	78
C	3	2	90	84
D	2	3	86	88
E	1	4	81	90
F	0	5	75	91

- (a) Use data in the table to draw a PPF. Label the vertical axis ‘Score on economics exam’ and label the horizontal axis ‘Score on chemistry exam’. Make sure to label the values where your PPF intersects the vertical and horizontal axes. **If you spend all five hours studying for your economics exam, you will score a 95 on the exam; therefore, your production possibilities frontier will intersect the vertical axis at 95. If you devote all five hours studying for your chemistry exam, you will score a 91 on the exam; therefore, your production possibilities frontier will intersect the horizontal axis at 91. See the PDF below.**



- (b) Label the points representing choice C and D. If you are at choice C, what is your opportunity cost of increasing your chemistry score by 4 points? **The points for choices C and D can be plotted using information from the table. Moving from choice C to choice D increases your chemistry score by four points but lowers your economics score by four points. Therefore, the opportunity cost of increasing your chemistry score by four points is the four point decline in your economics score.**
- (c) Under what circumstances would choice A be a sensible choice? **Choice A might be sensible if the marginal benefits of doing well on the chemistry exam are low relative to the marginal benefits from doing well on the economics exam—for example, the chemistry exam is only a small portion of your grade, but the economics exam is a large portion of your grade; or if you are majoring in economics and don't care much about chemistry; or if you already have an A sewn up in chemistry, but the economics professor will replace a low exam grade with this exam grade.**

2: Question 2.7 from Textbook (5 points)

Suppose that France and Germany both produce schnitzel and wine. The following table shows combinations of the goods that each country can produce in a day:

France		Germany	
Wine (bottles)	Schnitzel (pounds)	Wine (bottles)	Schnitzel (pounds)
0	8	0	15
1	6	1	12
2	4	2	9
3	2	3	6
4	0	4	3
		5	0

- (a) Who has a comparative advantage in producing wine? Who has a comparative advantage in producing schnitzel? **When France produces 1 more bottle of wine, it produces 2 fewer pounds of schnitzel. When Germany produces 1 more bottle of wine, it produces 3 fewer pounds of schnitzel. Therefore, France's opportunity cost of producing wine—2 pounds of schnitzel—is less than Germany's—3 pounds of schnitzel. When Germany produces 1 more pound of schnitzel, it produces 0.33 fewer bottles of wine. When France produces 1 more pound of schnitzel, it produces 0.50 fewer bottles of wine. Therefore, Germany's opportunity cost of producing schnitzel—0.33 bottles of wine—is less than that of France—0.50 bottles of wine. We can conclude that France has the comparative advantage in making wine and that Germany has the comparative advantage in making schnitzel.**
- (b) Suppose that France is currently producing 1 bottle of wine and 6 pounds of schnitzel, and Germany is currently producing 3 bottles of wine and 6 pounds of schnitzel. Demonstrate that France and Germany can be both better off if they specialize in producing only one good and then trade for the other. **We know that France should specialize where it has a comparative advantage and Germany should specialize where it has a comparative advantage. If both countries specialize, France will make 4 bottles of wine and 0 pounds of schnitzel, and Germany will make 0 bottles of wine and 15 pounds of schnitzel. After both countries specialize, France could then trade 3 bottles of wine to Germany in exchange for 7 pounds of**

schnitzel. France will have the same amount of wine as they initially had, but 1 more pound of schnitzel. Germany will have 3 bottles of wine and 8 pounds of schnitzel?that is, the same amount of wine, but 2 more pounds of schnitzel. Other mutually beneficial trades are possible as well.

3: Question 2.15 from Textbook (2 points)

According to the US Bureau of Labor Statistics, the amount of time men devote to housework has been increasing, while the amount of time women devote to housework has been decreasing. Briefly explain whether there is an economic explanation for these trends. **As women's job opportunities and wages have risen relative to men's, the opportunity cost to women of doing housework has increased more than has the opportunity cost to men.**