

HOMEWORK ONE:
DUE September 9th
 ANSWER KEY

If you work with others please hand in your assignment in your own words and identify those you worked with. Make sure this assignment is handed in at the beginning of class.

From the textbook, under **Problems and Exercises** on page 52:

1. #2

The opportunity cost of playing the computer game all weekend is the sacrifice of the Colorado ski trip, since that is the alternative that is the *next most attractive* to you.

2. #3

A technological innovation in lifesaving would rotate the PPF out along the horizontal axis.

3. #4

A technological innovation in the production of other goods would rotate the PPF out along the vertical axis.

4. What does the negative slope of the PPF mean? Why is it bowed out?

Negative slope implies trade off – you have to give up A to get B or give up B to get A.

The PPF is BOWED since there can exist increasing OC. → Resources are differentially productive when goods are being produced. What this means is that we know that resources are not identical, and therefore, some are better suited for producing one good than another. When these resources are switched from producing items for which they are well suited to producing goods for which they are ill suited, the opportunity cost of increasing the output of these goods rises.

5. Assume there are only two goods, burgers and sodas. If the price of a burger is \$3.20 and the price of a soda is \$0.40, what is the opportunity cost of buying a burger? What is the opportunity cost of buying a soda?

$$OC_{\text{burger}} = \frac{P_{\text{Burger}}}{P_{\text{soda}}} = \frac{\$3.20}{\$0.40} = 8 \text{ sodas} - \text{to buy one burger have to give up 8 sodas}$$

6. #6

a. **Table 2: Labor Requirements for Pineapples and Coconuts**

Labor Required for:

	1 Pineapple	1 Coconut
Mr. Howell	1 hour	1 hour
Mrs. Howell	½ hour	2 hours

b. Mrs. Howell has a competitive advantage in picking pineapples, since her opportunity cost of picking pineapples is lower than Mr. Howell's. Her opportunity cost of picking 1 pineapple is ¼ coconut, while his opportunity cost of picking 1 pineapple is 1 coconut. Mr. Howell has a competitive advantage in picking coconuts, since his opportunity picking coconuts is lower than Mrs. Howell's. His opportunity cost of picking 1 coconut is 1 pineapple, while her opportunity cost of picking 1 coconut is 4 pineapples. Mrs. Howell should specialize in picking pineapples, and Mr. Howell should specialize in picking coconuts.

c. Before finding each other, Mr. and Mrs. Howell's total production would be:

	Pineapples	Coconuts
Mr. Howell	6	6
Mrs. Howell	12	3
Total	18	9

After specializing, their total production would be:

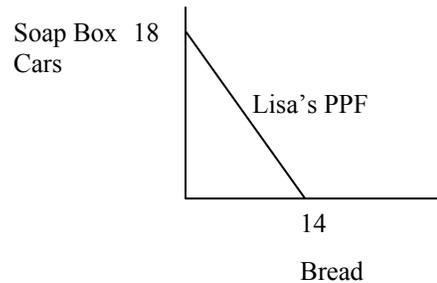
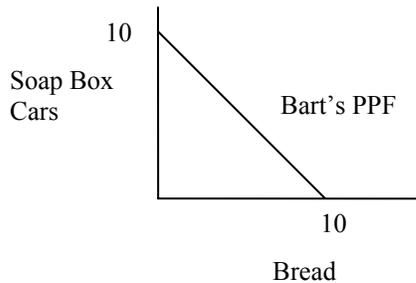
	Pineapples	Coconuts
Mr. Howell	0	12
Mrs. Howell	24	0
Total	24	12

Specifically, there are 6 more pineapples and 3 more coconuts available to be divided between them.

7. Consider the Production Possibilities Tables for the following two people during a given period of time.

Bart		Lisa	
Soap Box Cars	Bread	Soap Box Cars	Bread
0	10	0	14
5	5	9	7
10	0	18	0

a) Draw Bart's and Lisa's PPF.



b) Calculate the opportunity cost of soap box cars and bread for each person.

$$OC_{\text{cars}} \text{ for Bart} = \frac{10 \text{ Bread}}{10 \text{ Cars}} = 1 \text{ bread}$$

$$OC_{\text{cars}} \text{ for Lisa} = \frac{14 \text{ Bread}}{18 \text{ Cars}} = \frac{7}{9} \text{ bread}$$

$$OC_{\text{bread}} \text{ for Bart} = \frac{10 \text{ Cars}}{10 \text{ Bread}} = 1 \text{ car}$$

$$OC_{\text{bread}} \text{ for Lisa} = \frac{18 \text{ Cars}}{14 \text{ Bread}} = \frac{9}{7} \text{ car}$$

c) Who (if anyone) has an absolute advantage?

Lisa – she can produce more bread and more soap box cars

d) If these people decided to trade with each other, we might expect

(1) Lisa to produce only **Cars** – **lowest OC**

(2) Bart to produce only **Soap Box Cars** – **lowest OC**

e) One possible terms of trade (there are more than one possible) under which BOTH people would gain from trade might be:

Answers will vary – prices should be between OC!