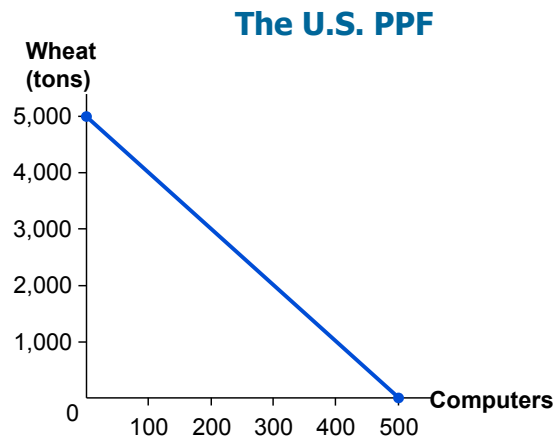


## Chapter 3: Interdependence and the Gains from Trade

- Why do people – and nations – choose to be economically interdependent?
- How can trade make everyone better off?
- What is absolute advantage? What is comparative advantage? How are these concepts similar? How are they different?

**Our Example:** Two countries - the U.S. and Korea, Two goods - computers and wheat, One resource - labor, measured in hours

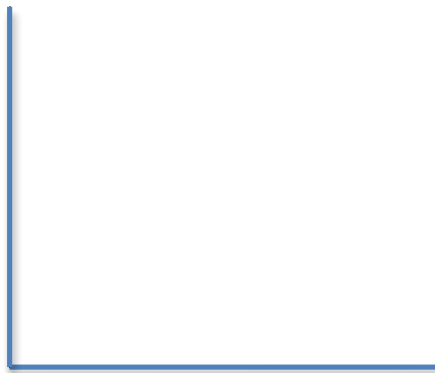
**US:** 50,000 hours of labor available for production, per month, producing one computer requires 100 hours of labor, producing one ton of wheat requires 10 hours of labor



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1. Use the following information to draw Korea's PPF:  
Korea has 30,000 hours of labor available for production, per month. Producing one computer requires 125 hours of labor. Producing one ton of wheat requires 25 hours of labor.



2. Suppose the U.S. produces 3400 tons of wheat. How many computers would the U.S. be able to produce with its remaining labor? Draw the point representing this combination of computers and wheat on the U.S. PPF.
3. Suppose Korea produces 240 computers. How many tons of wheat would Korea be able to produce with its remaining labor? Draw this point on Korea's PPF.

**imports:**

**exports:**

4. Suppose the U.S. exports 700 tons of wheat to Korea, and imports 110 computers from Korea. (So, Korea imports 700 tons wheat and exports 110 computers.)

How much of each good is consumed in the U.S.? Plot this combination on the U.S. PPF. How much of each good is consumed in Korea? Plot this combination on Korea's PPF.

**Trade Makes Both Countries Better Off**

<b>U.S.</b>			
	consumption without trade	consumption with trade	gains from trade
computers	250	270	
wheat	2500	2700	
<b>Korea</b>			
	consumption without trade	consumption with trade	gains from trade
computers	120	130	
wheat	600	700	

**Absolute Advantage:**

Which country has an absolute advantage in computers?

**Comparative advantage:**

Which country has the comparative advantage in computers?

The opportunity cost of a computer in US? in Korea?

Gains from trade arise from comparative advantage (differences in opportunity costs).

5. Argentina and Brazil each have 10,000 hours of labor per month.

In Argentina, producing one-pound coffee requires 2 hours and producing one bottle wine requires 4 hours.

In Brazil, producing one-pound coffee requires 1 hour and producing one bottle wine requires 5 hours.

Which country has an absolute advantage in the production of coffee? Which country has a comparative advantage in the production of wine?

### **The Legacy of Adam Smith and David Ricardo**

*Adam Smith:* In his 1776 book *An Inquiry into the Nature and Causes of the Wealth of Nations*, Adam Smith performed a detailed analysis of trade and economic interdependence, which economists still adhere to today.

*David Ricardo:* In his 1816 book *Principles of Political Economy and Taxation*, David Ricardo developed the principle of comparative advantage, as we know it today.

**Suggested problems: Problems and Applications- 1, 2, 3**