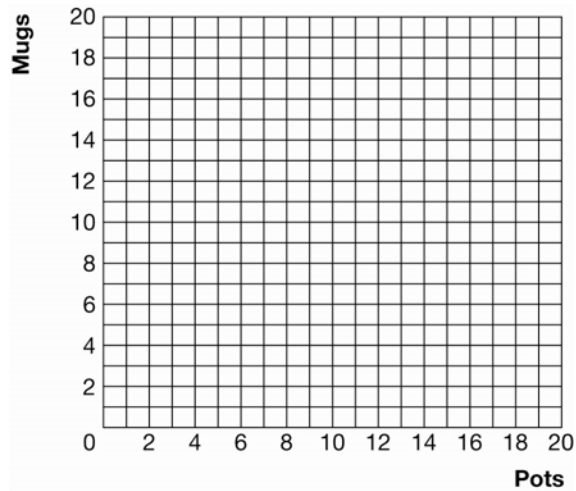


Chapter 3

1. Angela is a college student. She takes a full load of classes and has only 5 hours per week for her hobby. Angela is artistic and can make 2 clay pots per hour or 4 coffee mugs per hour.
 - a. Draw Angela's production possibilities frontier for pots and mugs.

Exhibit 2

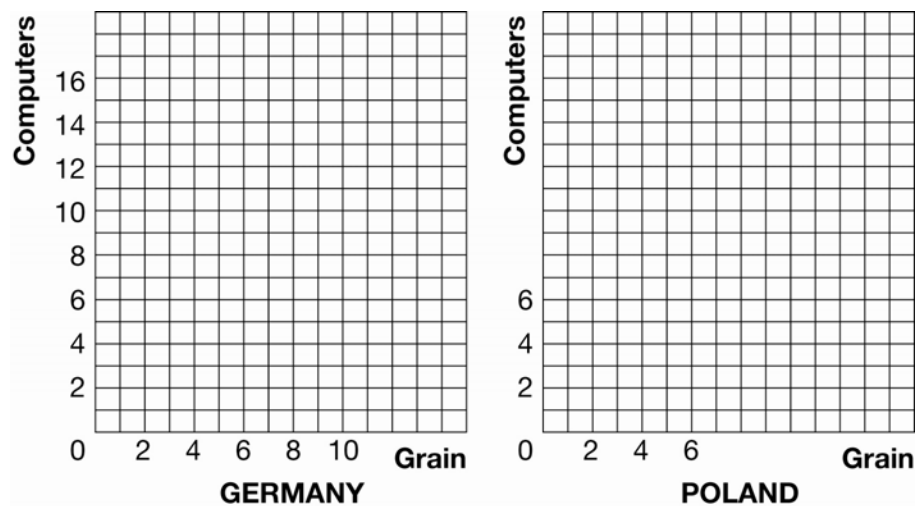


- b. What is Angela's opportunity cost of 1 pot? 10 pots?
 - c. What is Angela's opportunity cost of 1 mug? 10 mugs?
 - d. Why is her production possibilities frontier a straight line instead of bowedout like those presented in Chapter 2?
2. Suppose a worker in Germany can produce 15 computers or 5 tonnes of grain per month. Suppose a worker in Poland can produce 4 computers or 4 tonnes of grain per month. For simplicity, assume that each country has only one worker.
 - a. Fill out the following table:

	Computers	Grain
Germany	_____	_____
Poland	_____	_____

- b. Graph the production possibilities frontier for each country in Exhibit 3.

Exhibit 3



- c. What is the opportunity cost of a computer in Germany? What is the opportunity cost of a tonne of grain in Germany?
- d. What is the opportunity cost of a computer in Poland? What is the opportunity cost of a ton of grain in Poland?
- e. Which country has the absolute advantage in producing computers? Grain?
- f. Which country has the comparative advantage in producing computers? Grain?
- g. Each country should tend toward specialization in the production of which good? Why?
- h. What is the range of prices for computers and grain for which both countries would benefit from trading with each other?
- i. Suppose Germany and Poland settle on a price of 2 computers for 1 tonne of grain or 1/2 tonne of grain for a computer. Suppose each country specializes in production and they trade 4 computers for 2 tonnes of grain. Plot the final consumption points on the graphs you made in part (b) above. Are these countries consuming inside or outside of their production possibilities frontier?
- j. Suppose the productivity of a worker in Poland doubles so that a worker can produce 8 computers or 8 tonnes of grain per month. Which country has the absolute advantage in producing computers? Grain?
- k. After the doubling of productivity in Poland, which country has a comparative advantage in producing computers? Grain? Has the comparative advantage changed? Has the material welfare of either country changed?

- l. How would your analysis change if you assumed, more realistically, that each country had 10 million workers?
3. Suppose a worker in the United States can produce 4 cars or 20 computers per month while a worker in Russia can produce 1 car or 5 computers per month. Again, for simplicity, assume each country has only one worker.
 - a. Fill out the following table:

	Cars	Computers
United States	_____	_____
Russia	_____	_____

- b. Which country has the absolute advantage in the production of cars? Computers?
- c. Which country has the comparative advantage in the production of cars? Computers?
- d. Are there any gains to be made from trade? Why?
- e. Does your answer in (d) above help you pinpoint a source for gains from trade?
- f. What might make two countries have different opportunity costs of production? (Use your imagination. This was not directly discussed in Chapter 3.)