
Review Questions - Chapter Two

Opportunity Cost and the PPF
Professor Platt (ECO 201)

Your Name: _____ Section: _____

1. Explain how a production possibility curve illustrates the following economic concepts:
 - a. scarcity
 - b. choice
 - c. opportunity cost
 - d. increasing opportunity cost

2. For this question you are given the following production possibilities table:

Weapons	Food
0	2,000,000
100,000	1,920,000
200,000	1,800,000
300,000	1,660,000
400,000	1,500,000
500,000	1,320,000
600,000	1,120,000
700,000	900,000
800,000	650,000
900,000	350,000
1,000,000	0

- a. Draw the production possibilities frontier for this economy. (Put weapons production on the vertical axis.)
- b. Indicate the area of unattainable production combinations. Indicate the area of production combinations attainable with some resources unemployed.
- c. Calculate the per-unit opportunity cost for increasing weapons production from zero to 100,000 units, from 400,000 to 500,000 units and from 800,000 to 900,000 units. Explain why these results occur and how they are graphed.
- d. Use the concept of resources scarcity to explain in words why this society can't currently produce 500,000 units of weapons and 1,750,000 units of food.
- e. Suppose over time the amount of productive resources available to this society expanded enough so that the production combination in part d became possible. Draw the new production possibilities frontier into your original diagram. Explain why you drew it where you did.

3. Assume for this question that initially the country of Fredonia is producing \$35 billion worth of food and \$5 billion worth of weapons. In addition, assume that if Fredonia only produced food it would be able to produce \$40 billion worth, while if it only produced weapons it would be able to produce \$15 billion worth

- a. Define a production possibilities frontier (PPF). Depict the situation described above in a PPF. Make sure you point out all of the above positions.
- b. List and explain all the assumptions you made when drawing the PPF.
- c. Suddenly, a war starts, increasing the demand for weapons. Illustrate how this increased demand for weapons affects the PPF you drew in part a. Explain your answer.
- d. The war is dramatically ended when Xanadu drops a nuclear bomb on Eastern Fredonia, killing 10 million people and making 500,000 acres of land unlivable and unusable. How does this change Fredonia's PPF? Draw this into your diagram you drew in part a and explaining your answer.

4. Suppose that an economy produces only two goods, Pizza and Beer.

- a. Draw a reasonable production possibilities frontier for the economy. Explain why you drew it as you did.
- b. Suppose that a new technological advance makes the economy much more productive in producing Beer. Show how this discovery might affect the production possibilities frontier that you drew. Explain.
- c. Does this technological change permit society to produce more of good Pizza?
- d. Pick a point on the original production possibilities frontier and label it A. After the technological change occurs is A an efficient production point? Why or why not?
- e. Explain what the opportunity cost of producing more Pizza is at point A before and after the technological change occurs.

5. Suppose that an economy produces on two goods: baseball bats and 2 X 4's. Also, the only input needed to make these goods is trees. Here 1 tree makes 10 baseball bats, and 1 tree makes 20 2 X 4's. If there are 50 trees in the economy, draw the production possibilities frontier for this economy. Does this frontier illustrate the principle of increasing opportunity costs?