

1. **FIGURE 1** PPC shows the production possibilities curve for the economy of Alpha, which makes weapons of mass destruction and food.

a. If all resources are devoted to the production of food, Alpha can produce 140,000 pounds of food. In order to produce 1,500 WMD, the opportunity cost in terms of food is 10,000 pounds. To produce another 1,000 WMD, the opportunity cost risers/falls to 50,000 pounds. As long as the PPF continues to curve outward and downward, the opportunity cost of increased WMD output will continue to rise/start to fall. Food doesn't easily convert into weapons of mass destruction so more resources must be used as more

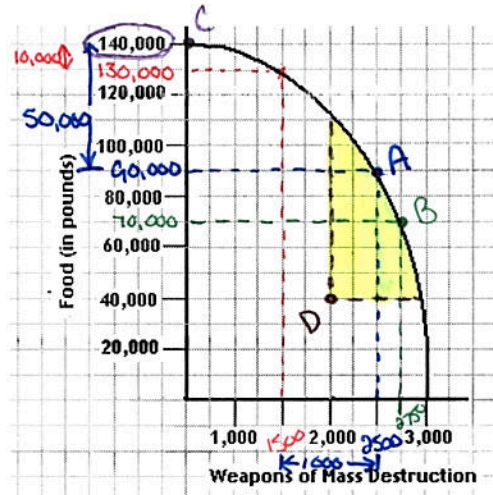


FIGURE 1 PPC

weapons are produced. If the resources were perfectly substitutable, how would you draw the PPF? (HINT: if your MP3 player could only hold 100 songs and currently held 100 songs, how many songs would you have to give up to get one more?)

b. Find the combination of 2,500 WMD and 90,000 pounds of Food on Figure 1. Label this point A. Is it an attainable combination for Alpha? Yes. Find the combination of 2,750 WMD and 70,000 pounds of Food. Label this point B. Is it attainable? Yes. Find specialization point, 0 WMD and 140,000 pounds of Food and label it point C. Is this point attainable? Yes. We conclude that attainable combination points are (on/inside/outside) the production possibilities curve.

c. A point inside of the production possibilities curve is inefficient because it is possible to produce more of one or both goods without opportunity cost. Find the combination of 2,000 WMD and 40,000 pounds of Food. Label this point D. Show that it is inefficient by shading all of the attainable combinations that show that more of one or both goods can be attained.

d. Suppose the government of Alpha wanted to move from 70,000 pounds of Food and 2,750 WMD to 0 pounds of Food and 3,000 WMD. Calculate the opportunity cost in terms of pounds of Food. 140,000 Is specialization point 0 pounds of Food and 3,000 WMD desirable? No. What point is best for Alpha?