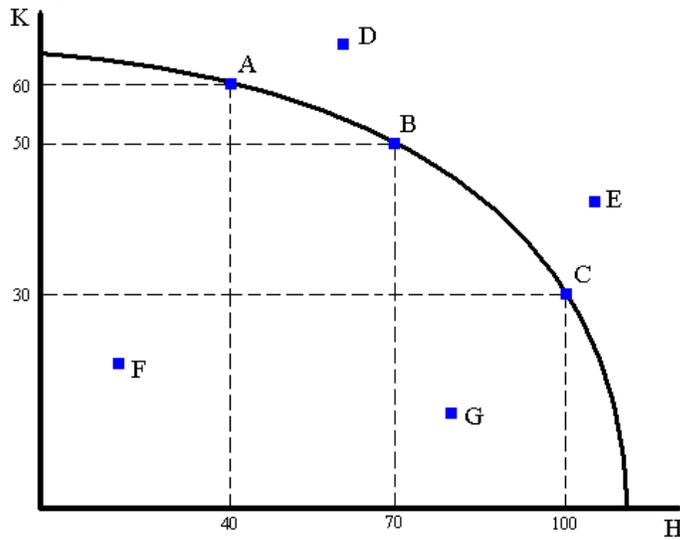
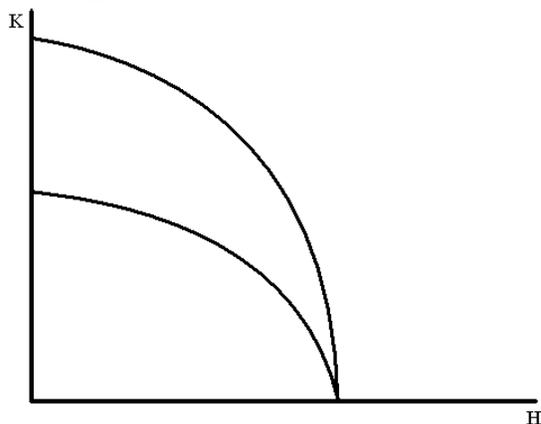


Example 1



The above picture describes the production possibilities set for North Kilttown, a community which can produce either kilts (K) or pounds of haggis (H) every day.

- a) At which of the labeled points is it feasible for North Kilttown to produce? **A, B, C, F, G**
- b) At which of the labeled points is North Kilttown producing efficiently? **A, B, C**
- c) If North Kilttown is currently producing at point A, what is the opportunity cost of producing 60 more pounds of haggis?  
**Producing 60 more pounds of haggis means moving from A to C, which has an OC of 30 kilts.**
- d) If North Kilttown is currently producing at point C, what is the opportunity cost of producing 20 more kilts?  
**Producing 20 more kilts means moving from C to B, which has an OC of 30 pounds of haggis.**
- e) What happens to the opportunity cost of producing more kilts as we move from point C to point A? Why might this be happening?  
**The OC making kilts rises due to the specialization of resources used to make the two goods.**
- f) A new technology emerges (say, a sewing machine) which allows residents of North Kilttown to make kilts with half as much labor time, but does not affect haggis production in any way. Draw the new PPF after the invention of this technology on the graph below. The PPF from before the invention of this technology is drawn for your reference.

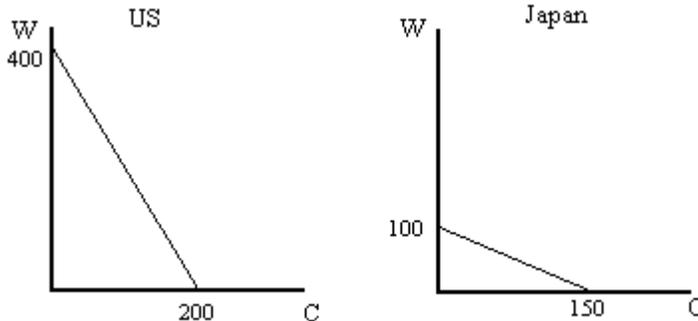


**The new PPF is sketched above. It should have the same intercept on the x-axis as the first PPF (as if our town put all its resources into haggis production, there is no change) but the y-intercept should be higher than before (as it takes fewer resources to produce the same number of kilts).**

*Example 2*

The US and Japan both produce cars and wheat, and are considering entering a trade agreement. The US can produce 400 bushels of wheat per year, or 200 cars per year, or any combination lying on the line between these two points. Similarly, Japan can produce 100 bushels of wheat per year, or 150 cars per year, or any combination lying on the line between these two points.

a) Graph the PPF for each country on the axes below.



b) What is the opportunity cost of producing 1 car in each country?

**US: 2 bushels of wheat**

**Japan: 2/3 of a bushel of wheat**

c) What is the opportunity cost of producing 1 bushel of wheat in each country?

**US: 1/2 of a car**

**Japan: 3/2 cars**

d) Which country has the absolute advantage in the production of each good?

**US has absolute advantage in the production of both goods, as it can make 200 cars to Japan's 150, and 400 bushels of wheat to Japan's 100.**

e) Which country has the comparative advantage in the production of each good?

**US has comparative advantage in production of wheat (only gives up 1/2 of a car), while Japan has comparative advantage in production of cars (only gives up 2/3 of a bushel of wheat).**

f) If the US and Japan were to trade these two goods, which country would export cars?

**As Japan has a lower OC of making cars, Japan would export cars.**

g) What is the range of prices at which the countries could come to a trade agreement? (that is, if the US is exporting cars, what is the maximum price Japan would be willing to pay per car, and what is the minimum price for which the US would be willing to sell a car?)

**Japan is exporting cars, and would not accept a price lower than 2/3 of a bushel of wheat. If the price were any lower than this, Japan could get more wheat per car given up by producing wheat on its own. Similarly, the US will not pay a price higher than 2 bushels of wheat per car, as if the price were higher than this, the US could get more cars by producing them itself. So the two countries could settle on a price anywhere between 2/3 of a bushel per car and 2 bushels per car, and both would be happy.**

h) Can we determine a specific price at which these two countries will trade? If so, what is it? If not, what does the answer depend on?

**We cannot determine a specific price, only the range of prices specified above. The exact price which the countries agree to depends on the relative bargaining strengths of each country. For example, if US consumers really want more than 200 cars per year, the US government wants to keep its citizens happy, and the Japanese negotiators know all this, then we might think that Japan has a strong bargaining position and would be able to extract a price close to the 2 bushel per car maximum.**