

Cooleconomics.com**Principles of Economics****Study Questions – Opportunity Cost and PPF**

1. Opportunity cost is the *one* next best alternative surrendered when a choice is made. Name the opportunity cost to you of each of the following things:

- a) Buying your economics textbook
- b) Attending economics class
- c) Doing this wonderful homework problem

2. Fredville is a fictitious country which has a fixed technology and a fixed amount of resources, and produces only two goods: diamonds and pearls.

- a) Draw Fredville's Production Possibilities Frontier (numbers aren't required).

In the year 1066, Fredville was producing some diamonds and some pearls. Also, all of Fredville's resources were being fully employed and optimally used.

- b) Illustrate Fredville's 1066 production by placing a point on the graph that you drew for (a) above. Label it "1066."

In the year 1492, Fredville produced NO diamonds and some pearls. Also, while every resource that was employed was being used optimally, some workers were unemployed.

- c) Illustrate Fredville's 1492 production on the graph that you drew for (a) above. Label the point "1492."

In the year 1775, Fredville produced some diamonds and some pearls. Also, while all resources were being used in production, they were not being used optimally.

- d) Illustrate Fredville's 1775 production on the graph that you drew for (a) above. Label this point "1775."

3. Ace reporter Lois Lane has discovered that the following production possibilities are on the country of Metropolis' PPF:

	A	B	C	D	E
Good 1	0	20	40	60	80
Good 2	100	75	50	25	0

- a) Graph Metropolis' PPF
- b) Calculate Metropolis' marginal rate of transformation.

4. There are 100 total workers in Mudland, a country which can produce only 2 goods: rugs and coats. Each worker employed making rugs can produce 3 of them; each worker employed making coats can produce 5 of them.

- a) Graph Mudland's PPF, using at least 2 numbers on your graph.
- b) In 1996 Mudland is producing 30 coats and 100 rugs. Is Mudland operating on its PPF? Explain why or why not.

Answers to Study Questions

1. Opportunity cost is the *one* next best alternative surrendered when a choice is made. Name the opportunity cost to you of each of the following things:

a) Buying your economics textbook

What would you have bought with the money if you had not bought the textbook? Suppose that Biff would have bought a shirt and slacks. Biff's opportunity cost is "a shirt and slacks."

b) Attending economics class

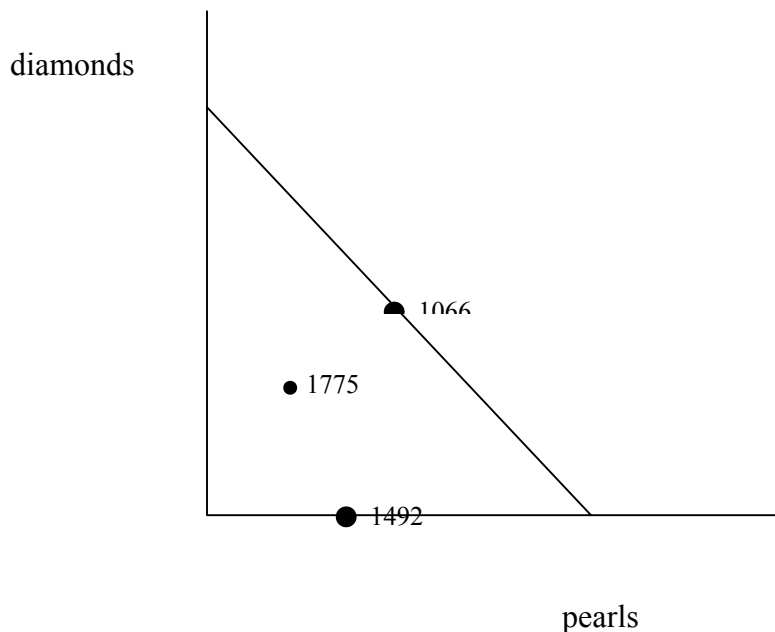
What would you do from 5:30-8:15PM on Tuesdays and Thursdays if you did not attend the class? Suppose that Buffy would watch TV; Buffy's opportunity cost is "watching TV."

c) Doing this wonderful homework problem

What would you be doing if you weren't working on this homework problem. Suppose that Zippy would be waxing his car; Zippy's opportunity cost is "waxing the car."

2. Fredville is a fictitious country which has a fixed technology and a fixed amount of resources, and produces only two goods: diamonds and pearls.

a) Draw Fredville's Production Possibilities Frontier (numbers aren't required).



In the year 1066, Fredville was producing some diamonds and some pearls. Also, all of Fredville's resources were being fully employed and optimally used.

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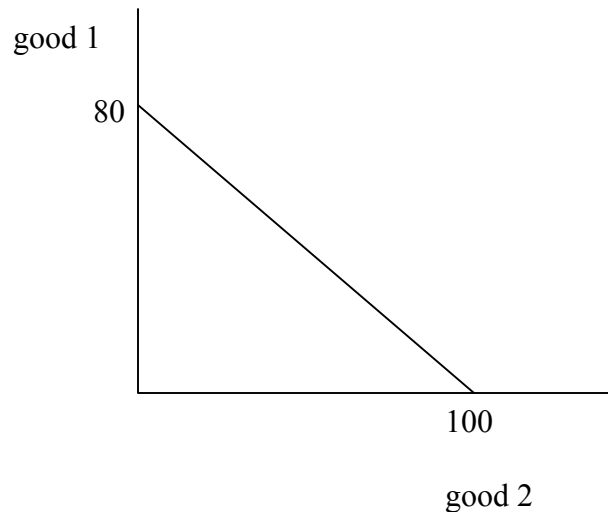
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3. Ace reporter Lois Lane has discovered that the following production possibilities are on the country of Metropolis' PPF:

	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
Good 1	0	20	40	60	80
Good 2	100	75	50	25	0

a) Graph Metropolis' PPF



b) Calculate Metropolis' marginal rate of transformation.

As one moves down along the PPF—say, from point E to point D—one gains 25 units of good 2, but as a consequence one loses 20 units of good 1. Hence the MRT is “25 units of good 2 to 20 units of good 1.”

4. There are 100 total workers in Mudland, a country which can produce only 2 goods: rugs and coats. Each worker employed making rugs can produce 3 of them; each worker employed making coats can produce 5 of them.

- a) Graph Mudland's PPF, using at least 2 numbers on your graph.
- b) In 1996 Mudland is producing 30 coats and 100 rugs. Is Mudland operating on its PPF? Explain why or why not.

No. If the workers are working hard, then it takes only 6 workers to produce 30 coats and it takes only 33 1/3 workers to make 100 rugs. That's a total of only 39 1/3 workers—way less than the 100 workers that are willing to work. So production is way lower than the maximum possible.

