

Production Possibility Curves (Transformation Curves)

Assumption: the curve or PPF (Production Possibility Frontier) represents full utilization of your productive resources. This means that all labor, land, capital and entrepreneurship/management are being used to their maximum. Therefore, you can be “on the curve” or “inside of the curve” but never “outside of the curve”.

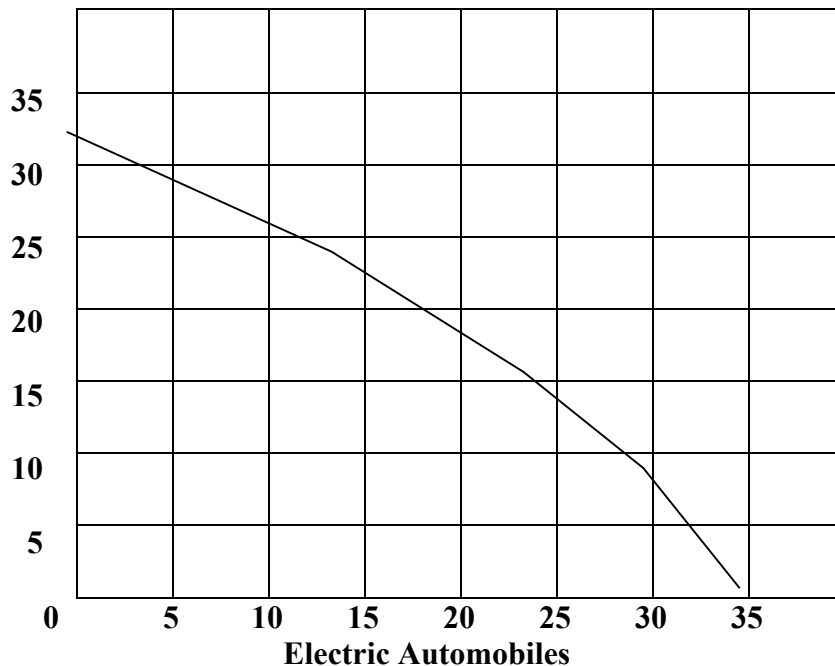
In order to move from one point on the graph to another involves trade-offs and opportunity costs. Below is an example of how to construct, read and interpret a PPF.

Data on possible uses of productive resources in Nowthen Economy.

	Log Cabins	Opportunity Cost (From previous point)	Electric Automobiles	Opportunity Cost (From previous point)
Point A	0	0	35	0
Point B	8	+8	30	- 5
Point C	16		23	
Point D	24		13	
Point E	32		0	

Plot these points on the graph below as they would appear on the curve drawn for you.

Log Cabins



1. Strategies to expand the production possibilities frontier:
 - a. Discover new land resources
 - b. Increase population and/or loosen immigration policy
 - c. Education & training
 - d. Increase productivity

2. Savings-Investment relationship

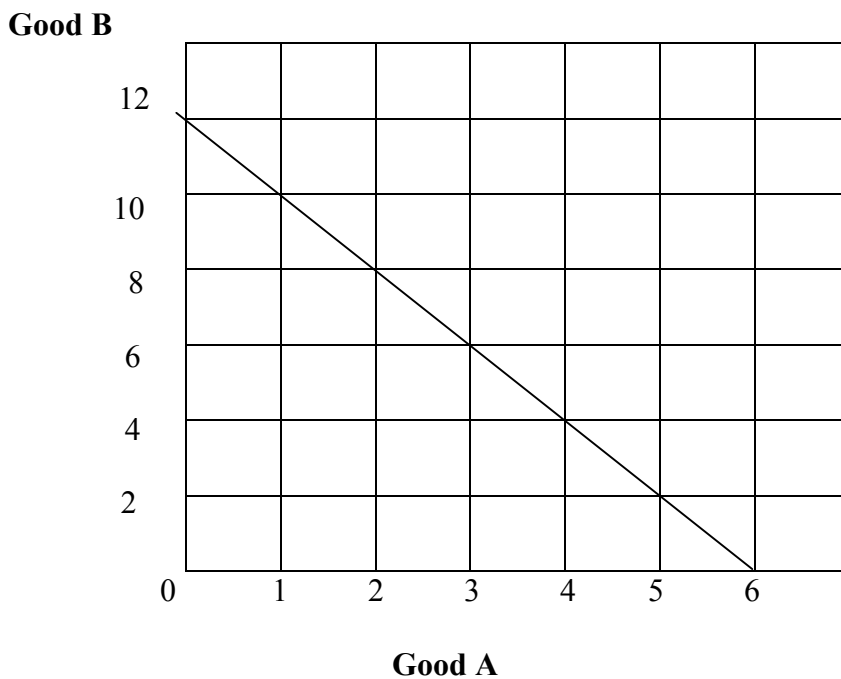
Increased savings now means greater levels of investment and more production later.

Scarcity, Opportunity Cost, and Production-Possibility Curves

Scarcity necessitates choice. More of one thing means less of something else. The opportunity cost of using resources for one thing instead of another is often represented in graphic form as a Production-Possibility Curve or Production-Possibility Frontier. (PPF)

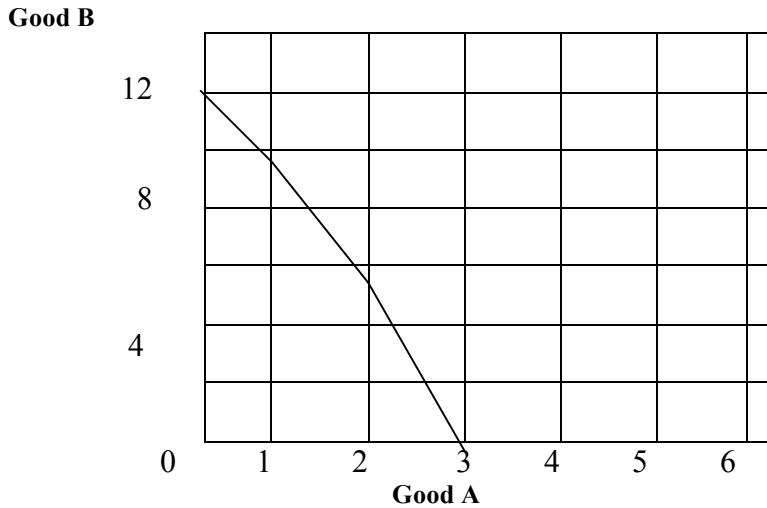
- A. Use the following graphs of production-possibility curves to answer questions a, b, c, and d as they relate to each specific curve. NOTE: all calculations are incremental not cumulative in nature. Thinking at the margin.

Production-Possibility Curve - 1



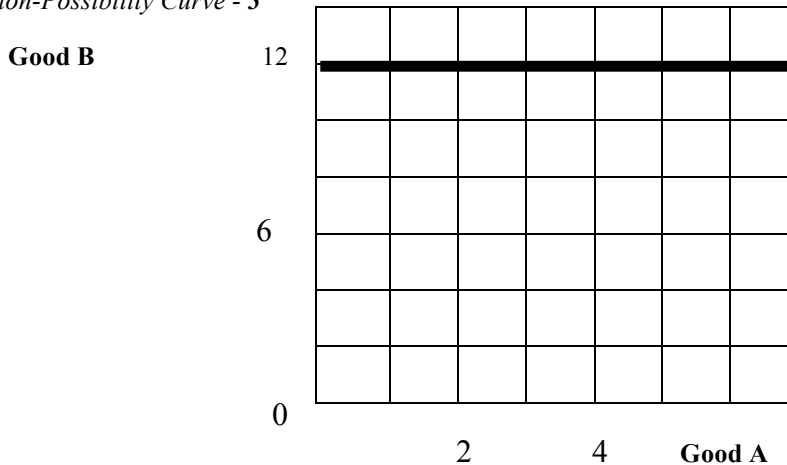
- 1) If this economy is currently producing 12 units of *Good B* and 0 units of *Good A*:
- a. The opportunity cost of increasing production of *Good A* from 0 units to 1 unit is the loss of _____ unit(s) of *Good B*.
 - b. The opportunity cost of increasing production of *Good A* from 1 unit to 2 units is the loss of _____ unit(s) of *Good B*.
 - c. The opportunity cost of increasing production of *Good A* from 2 units to 3 units is the loss of _____ unit(s) of *Good B*.
 - d. This graph is an example of _____ opportunity cost for *Good A*.
(Constant, Increasing, Decreasing, Zero)

Production-Possibility Curve - 2



- 2) If this economy is currently producing 12 units of *Good B* and 0 units of *Good A*:
- The opportunity cost of increasing production of *Good A* from 0 units to 1 unit is the loss of _____ unit(s) of *Good B*.
 - The opportunity cost of increasing production of *Good A* from 1 unit to 2 units is the loss of _____ unit(s) of *Good B*.
 - The opportunity cost of increasing production of *Good A* from 2 units to 3 units is the loss of _____ unit(s) of *Good B*.
 - This graph is an example of _____ opportunity cost for *Good A*.
(Constant, Increasing, Decreasing, Zero)

Production-Possibility Curve - 3

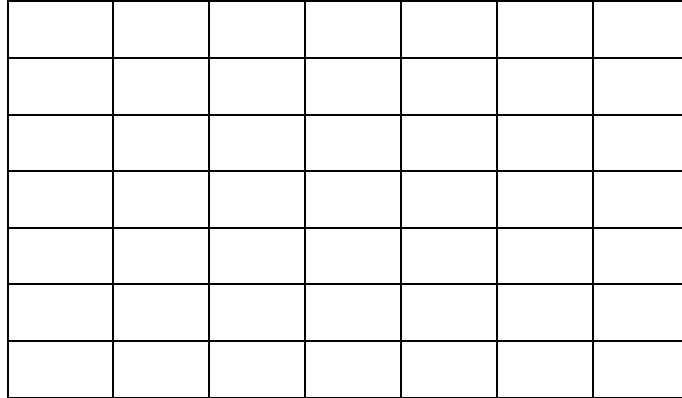


- 3) If this economy is currently producing 12 units of *Good B* and 0 units of *Good A*:
- The opportunity cost of increasing production of *Good A* from 0 units to 1 unit is the loss of _____ unit(s) of *Good B*.
 - The opportunity cost of increasing production of *Good A* from 1 unit to 2 units is the loss of _____ unit(s) of *Good B*.
 - The opportunity cost of increasing production of *Good A* from 2 units to 3 units is the loss of _____ unit(s) of *Good B*.
 - This graph is an example of _____ opportunity cost for *Good A*.
(Constant, Increasing, Decreasing, Zero)

B. Use the following graphs to show the appropriate production-possibility curves. Each graph will ask for a different type of curve. Do not worry about specific numbers, just draw an example of what each curve would look like.

Curve 4: Decreasing opportunity cost

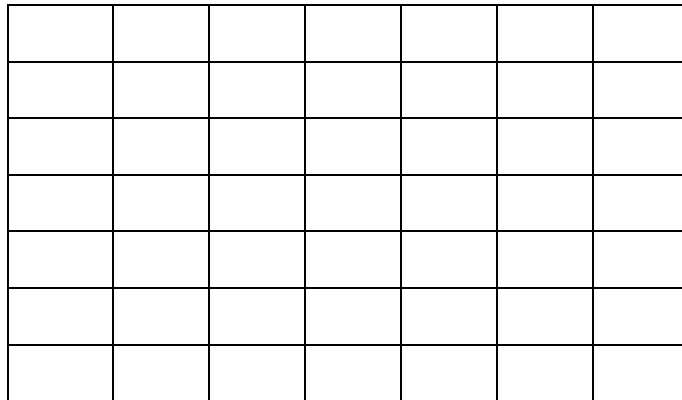
Good B



Good A

Curve 5: Constant opportunity cost

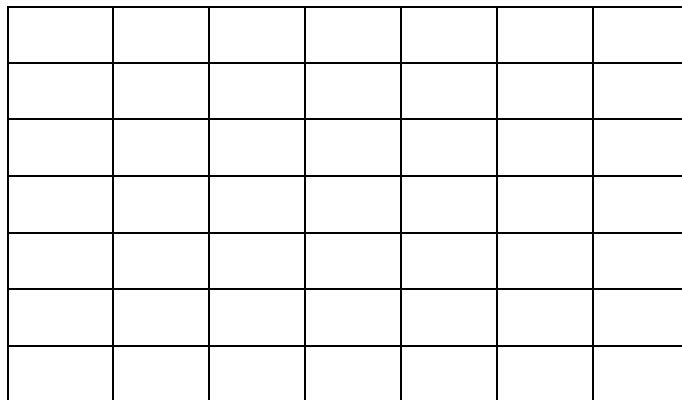
Good B



Good A

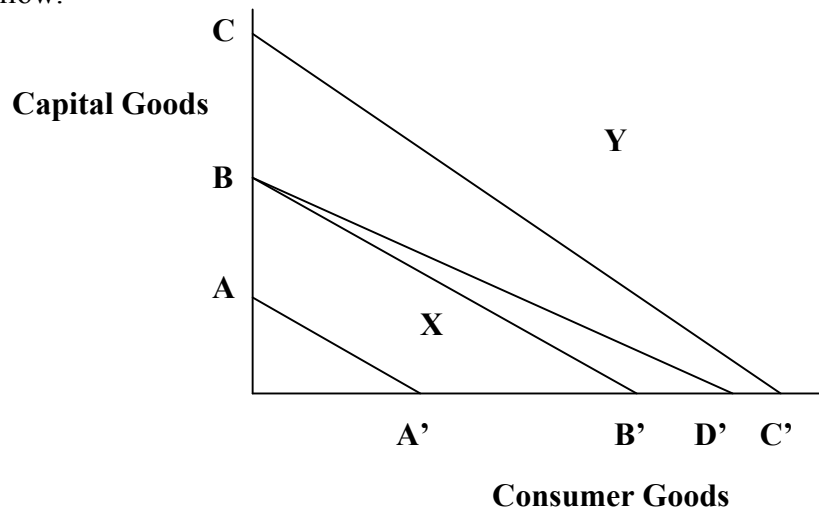
Curve 6: zero opportunity cost for Good B

Good B



Good A

C. Using the following production-possibility diagram, answer each of the questions that follow.



If BB' represents a country's current production possibility curve, which other curve would be its production-possibility curve if:

1. There were a major technological breakthrough in the consumer goods sector of the economy and the new technology was widely adopted?

Indicate the new curve that you would choose by writing its two letters in the margin to the left of the number of this question. Example: AA'

2. A new government was to come into power which forbids the use of automated machinery and modern production techniques in all industries?

Indicate the new curve that you would choose by writing its two letters in the margin to the left of the number of this question.

3. Massive new resources of oil and coal are found within the economy.

Indicate the new curve that you would choose by writing its two letters in the margin to the left of the number of this question.

4. Major technological innovations are adopted in both the consumer goods and capital goods sectors of the economy?

Indicate the new curve that you would choose by writing its two letters in the margin to the left of the number of this question.

5. What can you say about an economy which is represented by point X?
(Write a brief statement)

6. What can you say about an economy which is represented by point Y?
(Write a brief statement)