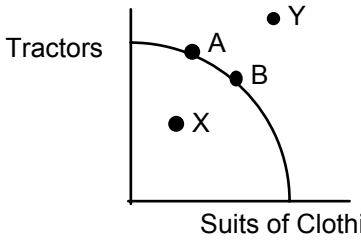
Production Possibilities Curves: Scarcity, Trade-offs and Opportunity Costs

1. Below is a production possibilities curve for tractors and suits of clothing.



_____ a. If the economy moves from point A to point B, it will
_____ b. produce (more/fewer) __a.__ tractors and (more/ fewer) __b.__ suits of clothing.

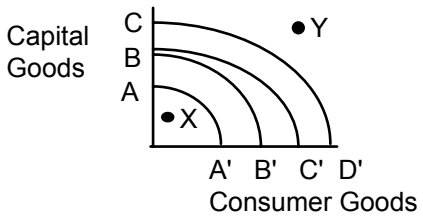
_____ c. If the economy is producing at point X, some of the
_____ d. resources of the economy are either (fully/not fully employed) __c.__ or (efficiently/inefficiently employed) __d.__.

_____ e. If the economy moves from point X topoint B,
_____ f. (more/ fewer) __e.__ tractors and (more/fewer) __f.__ suits will be produced.

_____ g. If the economy is to produce at point Y,it
_____ h. must either (add resources/increase production of tractors) __g.__ or (improve technology/increase production of suits of clothing) __h.__.

_____ i. All the combinations of products shown in
_____ j. the production possibilities curve (PPC) can be achieved only if there are full production and full employment in the economy; the **best** combination of products depends upon the (values/resources/ technology) __i.__ of that society and is a (scientific/ nonscientific) __j.__ matter.

2. Note the following production possibilities curve and use it to answer each of the questions below.



_____ a. If BB' represents a country's current production possibilities curve (PPC), which would be its PPC if there were a major technological breakthrough in the consumer goods industry and the new technology was widely adopted? (Use two letters to indicate the curve.)

_____ b. If BB' represents a country's current PPC, which would be its PPC if a new government were to come into power which forbids the use of automated machinery and production techniques in all industries?

_____ c. If BB' represents a country's current PPC, which would be its PPC if massive new sources of oil and coal were found within the economy and if there were technological breakthroughs in both sectors of the economy?

_____ d. If new resources were found and new technology created what point above would become more attainable?

_____ e. If a country is **not** fully and efficiently utilizing its resources, it would be producing at a point such as?

Using the diagrams below, illustrate the impact on the economy's production possibilities of each of the following scenarios.

3. An atomic bomb hits the continental United States and half of the labor force is wiped out.

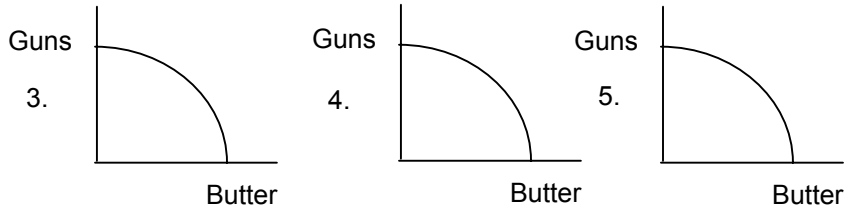
4. Research in computer-aided design (CAD) results in technological improvements that increase the efficiency of existing machines and equipment of all types.

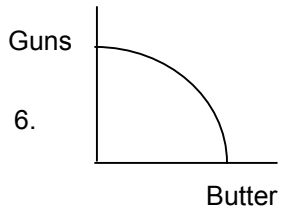
5. SDI research results in a new raw material for producing weapons. Unfortunately, the material cannot be used for butter production.

6. The economy goes into a recession, resulting in an unemployment rate of 10%.

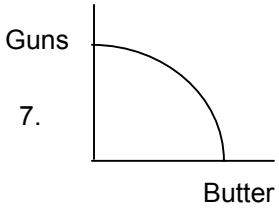
7. Political refugees from former Croatia enter the U.S. with specialized skills related to the dairy industry.

Use the diagram below to answer questions that follow.



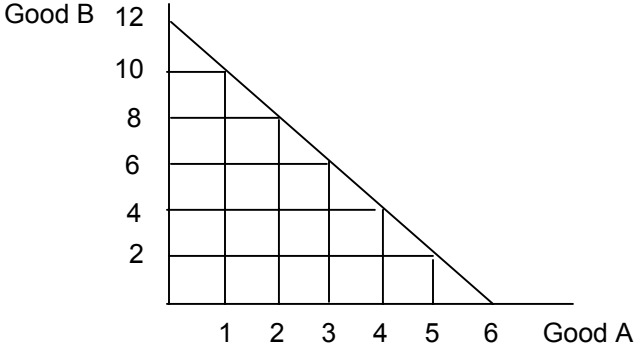


6.



7.

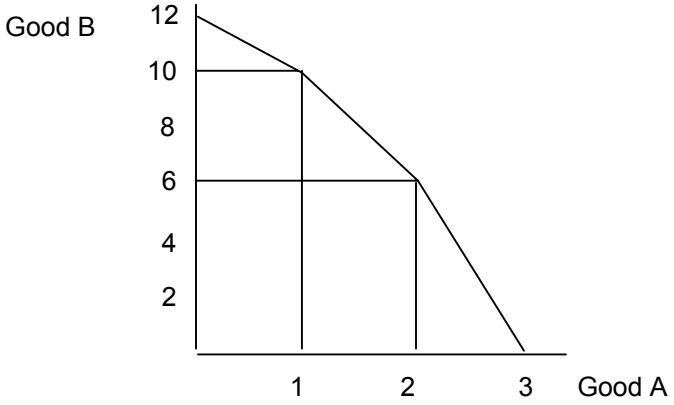
Use the diagram below to answer the questions that follow:



8. 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 to 1 units 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 is an example of _____ (constant, increasing, decreasing, zero) opportunity cost of Good A.

Use the diagram below to answer questions that follow.



9. 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 to 1 units 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 is an example of _____ (constant, increasing, decreasing, zero) opportunity cost of Good A.

10. A production possibilities table for two commodities, wheat and automobiles, is found below. The table is constructed employing the usual assumptions. Wheat is measured in units of100,000 bushels and automobiles in units of 100,000.

Combination	Wheat	Automobiles
A	0	7
B	7	6
C	13	5
D	18	4
E	22	3
F	25	2
G	27	1
H	28	0

Fill in the table below showing the opportunity cost per unit of producing the 1st through the 7th automobile.

Automobiles	Cost of Production
1st	_____
2nd	_____
3rd	_____
4thj	_____
5th	_____
6th	_____
7th	_____