Lab 2 – Production Possibilities and Economic Growth

Production Possibilities:

1. A Production Possibilities Curve (PPC) – and the area under it – represents the maximum possible output of one good that can be produced with available resources, given the output of the alternative good over a period. Any point along the PPC (or inside it) can be achieved with the current amount of resources.
2. Assumptions of the PPC:
    a.

    b.

    c.

    d.

3. Determination of PPC Shape:
    a. Law of Increasing Costs -

    b. Formula for calculating the average opportunity cost per unit of good gained:

A nation can produce two goods: beer and pizza. The following table shows the maximum amount of each good that this nation can produce at 5 different combinations of the two goods:

Point	Beer	Pizza
A	100	0
B	90	15
C	75	30
D	50	45
E	0	60

1. Draw a Production Possibilities Curve based on the information in the table above.

Point	Beer	Pizza
A	100	0
B	90	15
C	75	30
D	50	45
E	0	60

2. Calculate the average opportunity cost per good gained when moving between the points listed below:

A to B: _____ A to C: _____
A to E: _____ E to D: _____
E to C: _____ B to C: _____
C to B: _____ D to B: _____

3. Does the information in question 2 support the law of increasing costs?

Economic Growth

1. Sources of Economic Growth
   a.
   b.
   c.

2. Economic growth shifts the PPC outward. Back to our previous example of beer and pizza. A new dough recipe allows for half the original amount of flour to be used in pizza, resulting in an increase in the maximum amount of pizza we can produce. Repeat the example above with the new technology of pizza making.

Budget Line

1. Opportunity Cost can also be illustrated by the idea of a budget line
   a. Represents how we make decisions to consume goods based on our incomes and the price of goods
   b. Example: You have $20 (your budget) and there are two things that you can buy. You can buy movies for $1 each or you can buy basketball tickets for $2. Draw the budget line with basketball tickets on the x-axis.

   c. You calculate the opportunity cost of consuming one good by dividing the amount given up by the amount gained.

Problems

1. Assume you have $60 to spend each week. You can choose between hamburgers ($3) or books ($6).
    a. Draw your budget line with hamburgers on the y-axis and books on the x-axis:

    b. What is the opportunity cost of a book? Of a hamburger?

    c. Suppose your income fell to $30 a week, draw your new budget line.
    d. At your lower income, what is the opportunity cost of a book? Of a hamburger?

2. Mary spends all of her income on books and bread. The price of a loaf of bread is $2, and the price of a book is $10. Mary's weekly income is $100. True or false:
    a. The opportunity cost of a book is 5 loaves of bread.
    b. The opportunity cost of a loaf of bread is 5 books.
    c. If Mary's weekly income were to double, the opportunity cost of a book will also double.

3. Suppose the price of books and bread double and Mary's weekly income remains $100. True or false:
    a. Mary can buy just as many books and loaves of bread as if her income was cut in half, and the price of a book remained $10 and the price of a loaf of bread remained $2.
    b. The opportunity cost of a loaf of bread would double.
    c. The opportunity cost of a book would double.

4. A colder than normal winter hits Florida which destroys many orange fields. Show a hypothetical PPC between orange juice (x-axis) and orange concentrate (a more technologically intensive process) before and after the winter.