## Week 14 Recitation

For this week's recitation, we will study comparative advantage and gains from trade.

1) The table below shows the production capabilities of the Krusty Krab and Chum Bucket in a day.

|  | Burgers | Shakes |
| :--- | :--- | :--- |
| Krusty Krab | 500 | 120 |
| Chum Bucket | 160 | 240 |

a. What is the opportunity cost of burgers and shakes for each restaurant?
b. What item does the Krusty Krab have a comparative advantage in? What about the Chum Bucket?
c. If each restaurant produced only the good in which they have a comparative advantage and traded half of their production, how many burgers and shakes would they each have? Are they better off with trade?
2) Work with a partner on this question. Suppose the two of you are the only two inhabitants of a tiny island nation, and you are considering whether to trade with one another. The person whose last name comes first alphabetically is Producer 1; the person whose last name comes second is Producer 2. Below are the production possibilities for Producers 1 and 2.

Producer 1

| Fish | Coconuts |
| :--- | :--- |
| 0 | 10 |
| 1 | 8 |
| 2 | 6 |
| 3 | 4 |
| 4 | 2 |
| 5 | 0 |

Producer 2

| Fish | Coconuts |
| :--- | :--- |
| 0 | 15 |
| 2 | 12 |
| 4 | 9 |
| 6 | 6 |
| 8 | 3 |
| 10 | 0 |

a. Graph your production possibility frontier.
b. What is your opportunity cost of producing each good? In which good - fish or coconuts - do you have the comparative advantage?
c. Suppose you and your partner both specialize in producing the good in which you have the comparative advantage. Try to work out a trade deal. How many fish and how many coconuts do you both end up consuming after trade? Are you better off than you were before trade?
d. Was it easy or hard to arrive at a trade deal? Are you happy with the deal, or do you wish you could have done better?
3) So far, we have assumed that opportunity costs are constant - that is, that the amount of good A a country gives up to produce a unit of good B is the same for all quantities of goods A and B. But if you remember economies of scale (aka increasing returns to scale) from 202, you'll recall that often, costs of production fall as output increases. Complete the tables below with the opportunity cost of producing an additional car in the U.S. and South Korea.
US

| Cars | T-shirts | Opp. Cost of <br> Producing Car |
| :--- | :--- | :--- |
| 0 | 1500 | N/A |
| 1 | 1000 |  |
| 2 | 600 |  |
| 3 | 300 |  |
| 4 | 100 |  |
| 5 | 0 |  |

South Korea

| Cars | T-shirts | Opp. Cost of <br> Producing Car |
| :--- | :--- | :--- |
| 0 | 2000 | N/A |
| 1 | 1300 |  |
| 2 | 700 |  |
| 3 | 200 |  |
| 4 | 50 |  |
| 5 | 0 |  |

a. Suppose the US currently specializes in car production, producing 5 cars and 0 Tshirts per day, and South Korea currently specializes in T-shirt production, producing 0 cars and 2000 T-shirts per day. How much would it cost South Korea to produce 1 car (in terms of T-shirts)? At this point, is car production efficient in South Korea - that is, is South Korea able to produce a car with a lower opportunity cost than the US?
b. Now suppose South Korea's government uses infant industry protection policy, cutting off all trade with the US, and in response, both US and South Korea start producing 4 cars per day plus the corresponding number of T -shirts to meet domestic demand. At this point, which country has the lower opportunity cost of car production?
c. Starting from the production mix described in part (b), if South Korea lifts its ban on trade with the US, which country has the comparative advantage in car production? What insights does this give us?

