

This review sheet is intended to cover everything that could be on the exam; however, it is possible that I will have accidentally left something off. You are still responsible for everything in the chapters covered except anything that I explicitly say you are not responsible for. Therefore, if I left something off of this sheet, it can still be on the exam. There will be no multiple-choice questions. Most of the questions will be like the ones in the homework assignments, and possibly a few definition questions, but I am more likely to ask questions that make you use the definitions rather than recite them. I will probably ask one of the questions from the book at the end of the chapters.

The review session will be at a time to be determined in class, probably Monday 3/30.

The last time this was taught it was MWF, so the material for this exam was mostly from Exam #3, but some from #2 and #4.

Chapter 6 starting at Page 152: Explain why the diagram of costs/demand for a **monopolistically competitive** firm looks as drawn. *Note the vertical axis is wrong. It should be $\$/Q$. The same is true for the graph of the number of firms vs. the price. The cost line slopes up because it assumes output is constant.* Understand the **Product Cycle Model**. Be able to explain the reason each stage looks as is drawn. How do **transportation costs**, **logistic costs**, and **tariffs** affect the supply and demand for a good on the trade market. That is the graph where the exporting country is on one side of the axis and the other side of the axis is the other country. Explain how transportation costs can affect where a company sets up in **resource-oriented industries** and **market-oriented industries**, but not **footloose industries**. How can **environmental standards** affect for companies setup?

Chapter 7: In this chapter, we are looking at **comparative statics** rather than **dynamic analysis**. What do those mean? Understand the difference between **balanced growth** and the **growth of one factor**. Be able to explain the **Rybczynski Theorem**. (Do not worry, I won't take off for spelling it wrong.) What is meant by **neutral technical progress**, **labor-saving technical progress**, and **capital-saving progress**. How do they affect the PPF? What is meant by **protrade**, **antitrade**, and **neutral growth**? Be able to show them on the PPF/CPF/indifference curve diagram and the offer curve diagram for a **small country**. Why does the offer curve diagram look like that? What happens to welfare of the small country with each of these movements? We will assume that all goods are **normal goods** rather than **inferior goods**. *Remember, normally the labor intensive good is on the horizontal axis for the PPF and the offer curve diagrams.* Understand what is meant by the **terms-of-trade effect** and the **wealth effect** of growing the economy. Understand how **immiserizing growth** can result and be able to show it on PPF/CPF/indifference curve diagram. Be able to show on both the PPF/CPF diagram and the offer curve diagram how a country could have growth which benefits both its terms of trade and its wealth. For Section 7.6, understand how growth in both countries can undo the negative effects of the other country's growth and that tastes can move the offer curve. (I will not ask you to move the indifference curves because that is messy.)

Chapter 8: What are meant by **import tariff**, **export tariff**, **ad valorem tariff**, **specific tariff**, and **compound tariff**? Be able to show the partial equilibrium analysis (S/D) of an import tariff and an export tariff for a small country and an import tariff for a large country. Be able to find **consumer surplus (CS)**, **producer surplus (PS)**, and **tariff revenue (TR)** (if applicable) for free trade, autarky, and with the tariff. Use that to find the **dead-weight loss (DWL)**. Know which part of the DWL is from **consumption inefficiency** and which part is from **production inefficiency**. Be able to calculate the **effective rate of protection, a.k.a., rate of effective protection (ERP a.k.a. g)** for an industry from its tariff rate, the tariff rates of imported inputs, and the **value added** which comes from domestic sources

and that which comes from abroad. (Note that I could have changed $a_i t_i$ to $\Sigma a_i t_i$ and a_i to Σa_i so that there could be different tariffs on imported inputs.) The five results on Page 205 are results you should understand why they hold. Result #3 only holds if $t > t_i$. Understand why that is true. **Be able to show the general equilibrium (PPF/CPF) diagram for a small country.** *Note: with the tariff, the production and consumption points are where the new domestic price line is tangent to the PPF and the indifference curves respectively. However, they are both on the same line whose slope equals the world price. The distance between the two domestic price lines is the tariff revenue. Note the graph in the book is a tariff on importing the labor intensive good. If it was an import tariff on the capital intensive good, then the tariff revenue would be measured vertically.* Know the **Stolper-Samuelson Theorem**. Be able to draw the effects of a tariff on the offer curve diagram for a large country. *Note that in Figure 8.5, the tariff revenue is horizontal because it is an import tariff and imports for Country 1 are measured horizontally.* Be able to add the **indifference curves** to the offer curve diagram. *Note that for the labor abundant country, the indifference curves get steeper because as the country moves to the right, they are exporting more so they must get an ever increasing amount of imports (move up more). Similarly, for the capital abundant country, the indifference curves get flatter because as the country moves up, they are exporting more so they must get an ever increasing amount of imports (move right more).* Be able to find the **optimal tariff** and explain how the large country is gaining from the tariff and how we know the world is losing. The graph can be seen in Appendix A8.6. Ignore the Metzler Paradox. Understand why retaliation is a problem for the optimal tariff.

Chapter 9: Be able to show the effects of an **import quota** in the partial equilibrium analysis (S/D) for a small country. The D'_y in Figure 9.1 is showing the results of an increase in demand. It is not what I drew. You can draw the diagram and have the distance between S and D be the quota size (the books method) or you can add the quota to the supply and you will get the total supply available for our consumption (the way I did it in class.) Be able to find the consumer surplus, producer surplus and the area which either goes to the foreign firms or our government depending upon how the quotas are distributed. *Note that the end result of the quota and the tariff are the same providing the curves do not move.* Understand how other **non-tariff barriers (NTBs)** restrict trade. Some of these are **technical, administrative, and other regulations**. What are **international cartels** and how do they work? What are **persistent dumping, predatory dumping, and sporadic dumping**? Why would companies act those ways? Which should the receiving country protect itself from? Why? How does a **trigger-price mechanism** work? Is that good or bad? What are **export subsidies**? How do they hurt and help each country? Ignore FSCs. What are **countervailing duties** and when are they used? Understand the graph for an export subsidy on S/D. Explain the strengths (if they exist) and weaknesses of the **scientific tariff** and the **infant-industry** arguments. What determines who gets protected? Understand the general idea of **strategic trade policy**. Do not worry about the game theory. What do the following mean: **most-favored-nation principle, bilateral trade agreement, GATT, and WTO**? The list of 10 provisions of the **Uruguay Round** on Page 251 is important, except for #7 because it failed. However, I will not ask you to list them. I will ask you why some of those provisions are important.

Chapter 10: What are **free trade areas (FTA), customs unions (CU), common markets, and economic unions**? Why are the differences important? Be able to show **trade creation and trade diversion** on the supply and demand for an import. Understand why each of the six items in the list of properties which increase the probability of gains in welfare are likely to increase welfare of the country. Understand the benefits of FTA and/or CU. They include **more bargaining power, less resistance to free trade** (my belief), **more competition, greater economies of scale, and tariff factories**. Know what the following are: **EU, NAFTA** (being replaced by **USMCA**), and **Mercosur**. Ignore all other FTA, CU, etc.

Homework #7A for the material after Homework #7.

1) (10 points) We discussed three types of dumping, persistent, predatory, and sporadic. We also had two definitions, the politicians' and the economists'. So, effectively, there are six types of dumping. Which one cannot exist? Why?

2) (15 points) What is the scientific tariff? Is that a good or a weak argument for restricting trade? Explain your logic.

3) (15 points) The Uruguay Round of GATT, item #4 said "The volume of subsidized agricultural exports was to be reduced by 21 percent over a six year period; government subsidies for industrial research were limited to 50% of applied research costs." Why was this a good achievement?

4) (30 points) Draw the supply and demand diagram for a small country which joins a customs union. Draw it such that there is both trade creation and trade diversion. Find the consumer surplus, producer surplus, tariff revenue, and dead weight loss before the customs union and again after the customs union. What are the trade creation and the trade diversion? State how you found all the areas mentioned.

5) (10 points each) For each of the following, determine which is more likely to cause trade creation to be greater than trade diversion. Explain your logic. Hint: some of these are related to the probability of trade diversion, some of them are related to the size of the trade diversion.

A) High pre-trade tariffs or low pre-trade tariffs.

B) The more similar the countries are (like USA and Canada) or the more different they are (like USA and China).

C) A large number of countries (like the failed TPP would have been) or a small number of countries (like NAFTA and USMCA).