

## Hints for Economics 452 Problem Set One

Do a rough draft first, then copy more neatly to version you turn in. Work on each question as we complete that portion of chapter 3 so you do not put it all off until just before due. Questions 3 and 4 build on questions 1 and 2. Write your solutions on printout of the questions and staple pages together before turning in your problem set.

1&2. Since says to put bananas on the vertical axis, bananas takes the place of wine and apples is like cheese. For 1a and 2a when writing the equations for the Home and Foreign PPFs, make sure to write the labor constraint form with general notation first, then plug the numbers in, then rearrange to be in slope intercept form (with quantity of bananas on the left-hand side). For Home and Foreign's maximum production of apples and bananas, use the Q bar notation. See Example 3.1 Home PPF (slides 14-17) and Example 3.2 Foreign PPF (slides 24-27). When drawing the PPFs, wait until you have determined Foreign's maximum production of bananas. Make the horizontal scale go out to Home's maximum production of apples and the vertical scale go out to Foreign's maximum production of bananas so can draw Home and Foreign's PPF using the same scale. Draw the position of Home's maximum production of bananas in the right scale relative to Foreign's maximum production of bananas, and similarly for apples. For the endpoints of each PPF, write the number for the maximum production of apples or bananas (as on slide 17 and 27); do not need to use the Q bar notation. Label the horizontal axis as Apples and the vertical axis as Bananas. Label the PPF and PPF\*. For 1b remember to mention about taking the absolute value of the slope (slide 16). For 1c, see slides 36 and 53 (Example 3.3). For 2c, see slides 5, 8 and 9.

3. See Example 3.3. For 3a, see slides 44 and 55. To draw RS, put the value of RS tilde for where the jump occurs halfway along the horizontal axis and label the axis (see slide 59). Put the values of Home and Foreign's opportunity costs of apples in terms of bananas for where the steps occur on the vertical axis. To draw RD, construct a table like on slide 56 to determine the three points to depict: what RD is if relative price equals Home's opportunity cost of apples in terms of bananas (first row), what RD is if relative price equals Foreign's opportunity cost of apples in terms of bananas (last row), and what relative price is needed to make RD equal RS tilde. For 3b see slide 57; should be where RD and RS intersect on the graph. For the comparison see slide 58. For 3c, when free trade relative price is strictly in between two autarky relative prices, each country produces only its comparative advantage good and none of the other good - indicate the exact amounts each country produces of each good. Each country always exports its comparative advantage good - indicate "Home exports \_\_\_\_\_ and imports \_\_\_\_ while Foreign exports \_\_\_\_\_ and imports \_\_\_\_\_."

4. See slides 80-83 for Home TPF and slides 84-86 for Foreign TPF (Example 3.4). Be sure to write TPFs in all three forms. Graph Home TPF on the same graph as Home PPF (under question 1) and Foreign TPF\* on same graph as Foreign PPF\* (under question 2). Indicate numbers for the endpoints (maximum consumption of apples and bananas). Label as TPF and TPF\*.