

Hints for Economics 452 Problem Set Two

Work on each question as we complete that portion of chapter 5 (after practicing on corresponding exercise) so do not put it all off until just before due. Do a rough draft first, then copy more neatly to version you turn in. Write your solutions neatly on a printout of the questions and staple pages together before turning in your problem set.

1&2. See Example 5.1 Factors and Output (slides 15-19) and Example 5.2 Increase in Capital (slides 29-32). Since graph says to put wheat on the vertical axis, wheat takes the place of food and steel is like cloth. When writing the equations for the factor constraints, make sure to write the labor or capital constraint form with general notation first, then plug the numbers in (be careful to plug in correctly), then rearrange to be in slope intercept form (with wheat on the left-hand side). You do not need to show your calculations for the steel and wheat endpoints of each constraint, but do need to put those numbers on the graph. When drawing the factor constraints, wait until you have determined the steel endpoint of the new/ROW capital constraint and make the horizontal/steel scale go out to that value and the vertical/wheat scale go out to wheat endpoint of labor constraint so can draw all three factor constraints using the same scale. Draw the other endpoints to scale. Write the number for each endpoint of each factor constraint (as on slide 32). Label the horizontal axis as Steel and the vertical axis as Wheat. Label the factor constraints as L, K, and K' or K*. When finding the production bundles, be sure to show your work (see slides 18 & 30) and depict on graph. For 2c, in addition to saying that the new/ROW relative supply of steel to wheat is higher or lower than before/Home, write out an inequality with general notation and the numbers plugged in (like on slide 31). For 2d write out inequalities for relative factor intensity and relative factor abundance (see slides 6 & 26). Be sure to specify what each country imports and exports for the pattern of trade (see slide 33).

3&4. See Example 5.3 Goods and Factor Prices (slides 64-67) and Example 5.4 Increase in Price of Cloth (sides 74-78). For 3a and 4a, be sure to provide the general equation, with the numbers plugged in, and the slope-intercept form for each pricing equation (steel, wheat, and new higher price of steel under free trade). Do not need to show calculations for wage and rent endpoints of the pricing equations, but do need to put the numbers for the endpoints on the graph (as on slide 78). Wait until have found the new pricing equation for steel before drawing the graph so can pick on appropriate scale. Label the horizontal axis as Wage and the vertical axis as Rent. Label the pricing equations as W, S, and S' or P_w , P_s , and P_s' . When finding the factor prices (wage and rent), be sure to show your work (see slides 66 & 75) and depict on graph. In addition to saying that the new/free trade wage relative to rent is higher or lower than before/autarky, write out an inequality with general notation and the numbers plugged in (like on slide 76). When comparing the proportional changes, be sure to show calculations (see slide 77). Remember that benefit if purchasing power of income increases and lose if decreases. Under autarky (before trade occurs), do not know free trade prices of goods or factors yet, so in the last question be sure to specify a way to identify losers without needing to know that information.