

Place your name on the back of this sheet of paper and nowhere else. Staple your answers on the front of this sheet of paper. Failure to follow these directions will cost you 1 point. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. Failure to type it will cost you 10 points. If you use double-sided printing or print on the back of scrap paper, I will give you one additional point.

1) (15 points) Explain  $\frac{\Delta Y}{Y} = \frac{\Delta A}{A} + a_K \frac{\Delta K}{K} + a_N \frac{\Delta N}{N}$

Explain the fractions as single variables. For the parameters  $a_K$  and  $a_N$ , do not explain how a change in them would affect  $\Delta Y/Y$ , rather explain why they take the values we gave them.

2) (15 points) Draw the S/I diagram for a small open economy with a KFA deficit. State how you know it is a KFA deficit. Illustrate the effects of an increase in the world interest rate. Explain why the curve(s) moved as drawn. What happens to the interest rate, the level of saving, the level of investment, and the size of the KFA deficit?

3) (25 points) Draw the S/I diagram for a large open economy with a capital financial account surplus. State how you know it is a surplus. Illustrate the effects of an increase in the price of capital in the rest of the world. Explain why the curve(s) moved as drawn. What happens to the interest rate, the level of saving in both countries, the level of investment in both countries, and the size of the surplus?

4) (25 points) Draw the S/I diagram for a large open economy with a current account surplus. State how you know it is a surplus. Illustrate the effects of an increase in the income tax rate in the rest of the world. Assume Ricardian Equivalence does not hold. Explain why the curve(s) moved as drawn. What happens to the interest rate, the level of saving in both countries, the level of investment in both countries, and the size of the surplus?

5) (20 points) Draw the S/I diagram for a small country with balanced current account. Illustrate the effects of an increase in government spending assuming Ricardian Equivalence does not hold. Explain why the curve(s) moved as drawn. What happens to the current account? What is the economic reason for that?