

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) (10 points) Explain $\frac{\Delta Y}{Y} = \frac{\Delta A}{A} + a_K \frac{\Delta K}{K} + a_N \frac{\Delta N}{N}$. You can treat $\Delta X/X$ as a single variable after you define it. The a 's with a subscript are constants. So you just need to state their size and explain why they take that value.

2) (20 points) Draw the S/I diagram for a small country with a KFA deficit. Explain how you know your graph shows a KFA deficit. Illustrate the effects of an increase in the future marginal productivity of capital. Explain why the curve(s) moved as drawn. What happens to the level of savings, level of investment, the KFA deficit, and the interest rate?

3) (35 points) Draw the S/I diagrams for a large country and the rest of the world. Draw it such that the large country has a CA deficit. Explain how you know it has a CA deficit in your graph. Illustrate the effects of a negative supply shock in the rest of the world. Explain why the curve(s) moved as drawn. What happens to the interest rate, the level of savings in each country, the level of investment in each country, and the CA deficit?

4) (35 points) Draw the S/I diagrams for a large country and the rest of the world. Draw it such that the large country has a CA surplus. Explain how you know it has a CA surplus in your graph. Illustrate the effects of an increase of government spending in the rest of the world. Explain why the curve(s) moved as drawn. What happens to the interest rate, the level of savings in each country, the level of investment in each country, and the CA surplus?