

**Problem Set 3: Due in class, Wed., Feb. 13**  
**Questions 1-7 are good review questions for the February 8<sup>th</sup> exam**

1. Use the full-employment model to answer this question. Suppose the introduction of a new technology for production causes an increase in investment at each real interest rate. What will be the impact of this change on the equilibrium real rate of interest and the level of saving and investment if the interest rate elasticity of household saving is zero? How do your answers change if the interest rate elasticity of household saving is positive?

2. Suppose initially the US government has a balanced budget. Suppose the government then cuts taxes (assume expenditures remain unchanged). *Using the full-employment model*, fill in the following table by indicating how each of the following variables is predicted to change in response to the tax cut – use a + (for increase), - (for decrease), or 0 (for no change). For simplicity, assume the U.S. is a closed economy. Carefully explain why each of the variables is predicted to change in the way you indicated in the Table.

Potential GDP	Employment	Real Wage	National Saving	Investment	Real interest rate

3. Suppose initially that New Zealand, a small open economy, has a balanced budget. Suppose the government then cuts taxes (assume expenditures remain unchanged). *Using the full-employment model for a small open economy*, construct a table like the one in Question 2 and fill it in to show how each of the variables is predicted to change in response to the tax cut. *What happens to New Zealand’s trade balance? What happens to New Zealand’s capital account balance?* Carefully explain why each of the variables is predicted to change in the way you indicated in the Table.

4. Define the basic trade identity.

5. China has a large trade surplus. Does this mean it is a borrower or a lending in international capital markets? Explain.

6. Stiglitz-Walsh, page 191, Problem 4 (note – this is question 4 under Problems, not under Review Questions)

7. Stiglitz-Walsh, page 191, Problem 6.

The next two questions are based on Chapter 9, so this material will not be on the test Feb. 8.

8. Name three factors that are important for economic growth.

9. Suppose the growth rate of GDP is equal to (1/3 times the growth rate of the capital stock) plus (2/3 times the growth rate of the labor force) plus the growth rate of TFP. What is the effect on the growth rate of per capita GDP of each of the following:

- a) An increase in the growth rate of the capital stock from 1% per year to 2% per year.
- b) An increase in the growth rate of the labor force from 1% per year to 2% per year.
- c) An increase in the growth rate of TFP from 1% per year to 2% per year.
- d) Which of the above has the largest effect on the growth rate of per capita GDP?