

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 10 points. 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) (5 points) The US economy is currently growing at 3%. How long would it take for the economy to double? Briefly explain your logic and show all calculations.
- 2) (15 points) If the economy is growing at 5%, the labor force is growing at 4%, and the capital stock is growing at 3%, then what is the growth rate of total factor productivity (basically technology represented by the Solow residual)? Why don't we measure that directly? Show all work and briefly explain what you did.
- 3) (10 points each) For each of the following, state what it means and explain why that is important for economic growth.
  - A) Favorable environment for private enterprise
  - B) Openness to trade.
- 4) (15 points) Draw the diagram for the labor supply and labor demand diagram for labor in industry, that I taught you. Assume there is no minimum wage. Illustrate the effects of an increase the marginal productivity in industry. Explain why the curve(s) moved as drawn. What happens to the wage rate in farming and in the industry, and the amount of labor in both sectors? State how you found each of those on the graph.
- 5) (20 points) Draw the diagram for the labor supply and labor demand diagram for labor in industry, that I taught you. Assume there is minimum wage. Illustrate the effects of an increase in the population. Explain why the curve(s) moved as drawn. What happens to the wage rate in farming and in the industry, and the amount of labor in both sectors? State how you found each of those on the graph.
- 6) (15 points) Explain why industry pays the MPL while the rural farms pay the APL.
- 7) (10 points) Why might there be a minimum wage in industry even if there is no legal minimum wage? Explain your logic.