Wilf Csaplar Jr.   Economics 302   Homework #6   **Due Tuesday 10/4**

Place your name on the back of this sheet of paper and nowhere else. Staple your answers face up 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) (20 points) The article below mentions several impacts of the revenue part of the Build Back Better proposal which was modified and passed as the misnamed "Inflation Reduction Act of 2022". Draw the Solow Growth Model diagram. Illustrate one of the effects on the graph. Explain why the curve(s) moved as drawn.
https://taxfoundation.org/build-back-better-revenue-joint-economic-committee-tax/

2) (15 points) Explain the equation below. You can treat each of the fractions as one variable after you define them. For a_K and a_N, give me a number for them and tell me why that number makes sense. $\dfrac{\Delta Y}{Y} = \dfrac{\Delta A}{A} + a_K \dfrac{\Delta K}{K} + a_N \dfrac{\Delta N}{N}$

3) (5 points) Suppose GDP is growing at an annual rate of 5%; capital is growing at an annual rate of 6% and population is growing at an annual rate of 2%. What is the growth rate of technology? Show all work.

4) (20 points) Draw the Solow Growth Model graph. Use it to find the Golden Rule level of the capital-labor ratio. Explain why that point is where you drew it.

5) (20 points) Draw the Solow Growth Model graph. Illustrate the effects of an increase in the population growth rate. Explain why the curve(s) moved as drawn. What happens to the GDP per capita and the capital-labor ratio in the steady state? Explain why those results makes sense.

6) (20 points) Draw the Solow Growth Model graph. Illustrate the effects of a decrease in the saving rate. Explain why the curve(s) moved as drawn. What happens to the GDP per capita and the capital-labor ratio in the steady state? Explain why those results makes sense.