

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) (15 points) Explain the equation below including why the 3 is positive and why the 2 is greater

than 1.  $\frac{\Delta Y}{Y} = 3 - 2 \Delta u$

2) (15 points) The article below talks about three reasons that nurses are leaving the profession. For each of them, determine what happens to the unemployment rate and the labor force participation rate. Explain why that occurs. If the number of unemployed people changes, tell me which type of unemployment it is and why you chose that type. If you make any assumptions, state the assumption.

<https://www.usatoday.com/story/news/health/2023/05/03/nursing-employment-updates-why-are-nurses-leaving-the-profession/70174183007/>

3) (30 points) Draw both the production function with capital on the axis and the production function with labor on the axis. Illustrate the effects of an increase in the amount of capital. If a curve moves, tell me why. What happens to the MPK and the MPN. State how you reached those conclusions.

4) (15 points) Draw the NS/ND diagram. Illustrate the effects of an improvement in technology. Explain why the curve(s) moved as drawn. What happens to the wage rate and the number of people employed?

5) (15 points) Draw the NS/ND diagram. Illustrate the effects of an increase in wealth which affects most people, like the stock market rising. Explain why the curve(s) moved as drawn. What happens to the wage rate and the number of people employed?

6) (10 points) Does the way we drew the NS graph imply the income effect of a wage increase or the substitution effect of a wage increase have the dominant effect? Explain your logic.