

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 $\Delta Y/Y = 3 - 2\Delta u$, including why the 3 is not 0 and why the -2 is not -1.
- 2) (20 points) According to the <https://fred.stlouisfed.org/series/CIVPART>, the Labor Force Participation rate has been on a steady decline in the 21st century (except for some weird movement the two years following COVID.) Illustrate the effects of a decrease in the Labor Force Participation rate on the NS/ND diagram. What happens to the quantity of labor and the real wage rate?
- 3) (20 points) I found an interesting graph, Illustrate the effects of the change in labor productivity on NS/ND diagram. Explain why the curve(s) moved as drawn. What happens to the quantity of labor and the real wage rate?
<https://www.bls.gov/productivity/images/labor-compensation-labor-productivity-gap.png>
- 4) (15 points) Explain why the NS curve looks as drawn. Which effect does this assume is stronger? Explain why that makes sense.
- 5) (15 point each) Answer each part in separate paragraphs. For each event, determine what happens to the labor force participation rate and the unemployment rate. State all assumptions you are making. Explain your logic. Which type of unemployment is that? Explain your logic.
 - A) In April of 2020, a large number of were lost. <https://www.cnbc.com/2020/05/08/these-industries-suffered-the-biggest-job-losses-in-april-2020.html>
 - B) John has been looking for a job for so long, that he decides he will never get one and quits looking.