

Do not write your name on the assignment. Write your name only on the back of this sheet of paper and staple your answers on the front of this sheet of paper. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. Failure to follow these directions will cost you 1 point on the assignment and failure to type it will cost you 10 points.

1) (40 points) Draw the indifference curve/budget constraint diagram for oranges and bananas when the price of an orange is \$0.50/orange and the price of a banana is \$0.25/banana. Assume your income is \$5. Draw the result of a rise in the price of oranges to \$0.75/orange. Show the income and substitution effects on both goods. **As drawn**, are they substitutes or complements? Explain why the curve(s) moved as drawn, how you found the income and substitution effect, and how you knew if they were substitutes or complements.

2) (25 points) Draw indifference curve/budget constraint diagram for potatoes and strawberries. Draw an increase in income assuming that potatoes are inferior goods. Explain why the curve(s) moved as drawn and how you can tell potatoes are inferior.

3) (15 points) From the indifference curve/budget constraint diagram, we conclude that $MU_X/P_X = MU_Y/P_Y$ is utility maximizing. Explain the economic reason for this fact.

4) (20 points) What is the identification problem? Do you think it is very important in economics or relatively minor? Explain your logic.