

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 this assignment 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) What is the equation for production efficiency? Explain why it makes economics sense. How does it relate to the PPF?

2) (15 points) What is the equation for output efficiency? Explain why it makes economics sense. How does it relate to the PPF?

3) (30 points) Draw a PPF/Indifference curve diagram. Find the optimal production point. Explain why perfect competition will yield that point. Make sure you show the price line.

4) (25 points) Draw a utility possibilities frontier. What is the equation which determines if we are on it or not? Explain why that equation is important. What does equity imply about where we should be on the curve.

5) (15 points) Why is Pareto Optimal a necessary condition for efficiency, but not a sufficient condition?