Economics 2
Spring 2020

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PROBLEM SET 1

DUE AT THE *BEGINNING* OF LECTURE ON TUESDAY, FEBRUARY 4TH

You may work together on the problems, but your answers must be ***in your own words*** and ***handwritten***. You also must ***list the other students with whom you worked***.

For all questions be sure to explain your answers and to use graphs whenever appropriate.

1. Consider the PPC for the U.S. economy for health care and for all other goods and services.

- **a.** Draw the production possibilities curve (PPC) for the U.S. economy based on this categorization, with health care on the horizontal axis and all other goods and services on the vertical axis. Why is the PPC for the U.S. economy likely to be bowed out? Explain in words what the following represent: the point where the PPC intersects the vertical axis; the point where the PPC intersects the horizontal axis; the slope of the PPC at a given point.
- **b.** Suppose improvements in education make all workers more skilled. How, if at all, would this development affect the PPC?
- **c.** Suppose there is an improvement in imaging technology. While these improvements increase productivity in both the health-care and non-health-care sectors of the economy, they are likely to have a particularly large effect in the health-care sector. How, if at all, would this development show up in the PPC diagram?
- **d.** Suppose that health care reform both improves productivity in the health care sector and moves some of the economy's labor and capital into the health care sector from other parts of the economy. How, if at all, would these developments show up in the PPC diagram?

2. This problem asks about opportunity costs in various situations.

- **a.** You have an afternoon off and can either put together two new bookcases or watch three TV shows. What is the opportunity cost of watching a TV show?
- **b.** In lecture, when we discussed the opportunity cost of going to graduate school instead of taking a job, we listed the explicit costs of graduate school (such as tuition and books) and the earnings that you would forgo. But we did not list your living expenses, such as food and rent, while you were in graduate school. Should those be included as part of the opportunity cost?
- **c.** One gets frequent flyer miles for free. Does that mean that the opportunity cost of using them for a particular flight is zero?

3. Three friends, Elsa, Anna, and Olaf, run a restaurant in Stockholm. The restaurant sells two dishes, meatballs and herring. Each worker works 8 hours per day. While all three can produce both dishes, they differ in the number of each they can produce in an hour. The following table shows the number of servings of meatballs and herring each worker could produce in an hour.

	Meatballs/Hour	Herring/Hour
Elsa	2	3
Anna	1	4
Olaf	3	1

- **a.** For each worker, what is the opportunity cost of 1 meatball (in terms of herring)? Of 1 herring (in terms of meatballs)?
- **b.** Draw the production possibilities curve (PPC), with herring on the horizontal axis, for the restaurant (for a single day) when there is no specialization—that is, when each worker divides their time between meatball production and herring production in the same way as the other two workers. Identify and explain the vertical intercept, the slope, and the horizontal intercept of the PPC in this case. Why does the PPC without specialization have the shape that it does?
- **c.** Draw the PPC for the restaurant when the three workers specialize according to comparative advantage. Again, identify and explain the vertical intercept, the slope(s), and the horizontal intercept of the PPC in this case. Also, give the quantities of herring and meatballs that correspond to any kinks in the PPC. Why does the PPC with specialization have the shape that it does?

4. Describe and show on a separate graph how each of the following developments would affect the rental price charged by landlords and the quantity of apartments rented in a city where rents are not regulated.

- **a.** Climate change causes many people to move away from the city.
- **b.** The opening of a new downtown light-rail system makes it cheaper to travel within the city.
- **c.** New regulations force landlords to stop renting many apartments.
- **d.** The city departs from its policy of not regulating the rental apartment market by placing a binding price ceiling on rents.

5. Continue to consider the market for rental apartments in a city where rents are not regulated.

- **a.** Do you think the price elasticity of demand for rental apartments in the short run (over a few months, for example) is likely to be fairly high or fairly low?
- **b.** How would you expect the development in problem 4(c) above to affect total spending in the market for rental apartments in the city in the short run?