Intermediate Micro HW 1

June 1, 2016

DUE DATE: June 6, 2016 at start of class

1 Nonconvex Indifference Curves

1. What does it mean for a set to be convex?
2. What does it mean for indifference curves to be convex?
3. Think of a real-life decision problem where indifference curves can reasonably be nonconvex. Explain why you think the ICs are nonconvex in this situation.

2 Didi Chuxing and Uber

Consider the problem of getting around Xi'An over the course of your month-long stay here.

For the purposes of the exercise, you only have two choices for any given trip – Didi Chuxing (herein Didi) and Uber.

1. Argue that Didi and Uber are perfect substitutes. To do so, you'll need to explain what perfect subtitutes are, and why this setting applies to Didi and Uber.
2. Now argue that Didi and Uber are *not* perfect substitutes. Which description do you think is more accurate?
3. Fix your income at ¥30000 per month. Let the price of an Uber be p_u per mile and that of Didi p_d. Assuming perfect substitutes, describe the demand function as a function of the price pair (p_u, p_d).

3 Textbook Exercises

Varian Exercises 4.3, 4.4, and 5.5