Problem Set 9

Econ 115a

April 11, 2001

Be sure to mark your paper with your name, your teaching assistants’ name and section time.

1. Define
   (a) Moral Hazard
   (b) Expected Utility
   (c) Marginal Social Benefit

2. Suppose that there is a “lemons problem” for used widgets.
   (a) Draw the supply and demand diagrams that might be associated with this market.
   (b) Why do they slope the way you have drawn them?
   (c) Give an example of a real-world market where the lemon’s problem might occur (why?)

3. Consider two “lotteries” that represent possible economic situations. The first returns $4 with certainty. The second returns $1 with probability \( \frac{1}{2} \) and $9 with probability \( \frac{1}{2} \).
   (a) What is the expected dollar value of the two lotteries?
   (b) Suppose that Jane values the outcome of a lottery according to a utility function \( \sqrt{y} \), where \( y \) is the return from the lottery.
   (c) Is Jane risk averse?
   (d) What is Jane’s expected utility from each of the two lotteries?
   (e) Which lottery would Jane prefer?

4. Mr. Big wants to hire an employee to run his business while he goes away on a vacation. It will be hard to observe the effort levels of the employee and the business is risky. What advice do you have for Mr. Big about how to pay his employee? How does your answer vary depending on whether the employee is risk averse?