Lab Question 6 for ECON 2101-001 (Intermediate Microeconomics)

Week of June 7, 2017

1. Ball's Bakery can employ two workers to make cakes, y. Anne can make 4 cakes an hour and earns $20 an hour. Bob can make 2 cakes an hour and earns $20 an hour. Their work hours are z_1 and z_2 respectively, so the production function of cakes is therefore: $y=4z_1+2z_2$. Assume that Anne has already been contracted to work exactly 10 hours (fixed), but Bob's hours are flexible.
    a) Draw the short-run production function for cakes.
    b) Find how much Bob will have to work to make y cakes. Use this to get the total cost function for cakes in the short run: TC(y).
    c) What is MC(y)?
    d) If the Bakery can sell a cake for $8 each, how many cakes will it make and sell? What will its profits be? Explain.

2. Suppose there is an economy with 10 different people, each of whom have individual demands given by $x=10-p/2$.

    a) Find and draw the aggregate demand curve for the market.

    b) What is the consumers' surplus when p=12? What is each person's consumer's surplus?

    c) What is the change in CS when p drops to 8(for the market)?

    d) Calculate the market elasticity of demand when p=8. Calculate each individual's elasticity of demand when p=8.