

The Last One!

Place your name on the back of this sheet of paper and nowhere else. Staple your answers on the front of this sheet of paper. Failure to follow these directions will cost you 1 point. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. Failure to type it 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.

Seniors taking *comps* have the option of doing this assignment or not. If you want to hand it in, it will give you more points with which to raise your grade and it will help you study for the exam. You will take Exam #4 on 4/25 during the class period. It will be in Morlan 101 with Ramjee. The test will cover through page 378 in Chapter 9. See old review sheets for help with what to study. The appendix will help you with the Cournot model, but I have a non-zero MC.

1) (20 points) Use the table below to calculate the CR4, CR8, CR14, and HHI. Show all work and briefly explain what you did. If firms #8 and #9 merged, then how much would the HHI change? Should the government allow the merger? Explain your logic.

| Firm | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Sales | 50 | 50 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 300 | 400 | 500 |

2) (50 points) Suppose a Cournot duopoly is facing an industry demand curve of $P = 14 - Q/6$. If the marginal costs are \$4/unit, then derive the one of the firm's demand curve. Plot it with the industry demand curve. Use it to derive the best response function. Draw it. What is the other firm's best response function? Draw that. Find the equilibrium outputs and prices. Show all work and briefly explain how you got each line, price, and outputs.

3) (30 points) Draw the "Kinked Demand Curve" and explain why it takes that shape. Derive the marginal revenue curve and explain how you got it. Explain why companies may be reluctant to change their prices.