

Write your name on the cover of the test booklet and nowhere else. Enclose this sheet with the booklet. Failure to follow these directions will cost you 1 point. The test has 100 points (to be scaled up to 170 points) and is scheduled to take 50 minutes. Therefore, expect to spend 1 minute for every 2 points. For example, a 12-point question should take 6 minutes. I cannot give extra time because some students have a class after your class.

1) (8 points each) Figure #1 has at least four errors. Find THREE of them. Explain how you know they are errors. It is supposed to be a drawing of the D/MR/ATC/MC diagram for a company facing a kinked demand curve. The profits are claimed to be the rectangle between the kink, Point X, the vertical axis point labeled "ATC", and the vertical axis point labeled "P".

2) (10 points) Answer EITHER Part A OR Part B.
 A) What is the profit-maximizing equation? Explain why that maximizes profits.
 B) What is the supply curve for a perfectly competitive firm? Explain why that is the supply curve.

3) (16 points) Suppose the following table represents the sales of the firms. Calculate CR4, CR8, and the HHI. Show all work and briefly explain how you did it.

Firm	1	2	3	4	5	6
Sales	100	100	100	200	200	300

4) (22 points) Answer EITHER Part A OR Part B.

A) Draw the industry supply and demand diagram for a perfectly competitive industry. Beside it draw the firm's D/ATC/AVC diagram for a firm making positive profits. Explain how you know they are making positive profits. Illustrate what will happen over time. Explain why the curve(s) moved as drawn.

B) Draw the industry supply and demand diagram for a perfectly competitive industry. Beside it draw the firm's D/ATC/AVC diagram for a firm losing money but staying in business. Use the graph to prove they are losing money, but that they would lose even more money if they shut down. Explain how you found the losses if they remain open and the losses if they shut down.

5) (28 points) Answer EITHER Part A OR Part B.

A) Draw the ATC/AVC/MC/D diagram for a monopolistically competitive firm which is losing money. Find the quantity produced and the price charged. Explain how you found them and how you know they are losing. Illustrate what happens over time. Explain why the curve(s) moved as drawn. Find the new price and quantity produced. If there are any important points, which you want me to notice, state what they are.

B) Suppose the industry demand curve is given by $P = 100 - 2Q_i$ and the firms' marginal cost curve is given by $MC_i = 4$. Draw the D/MC diagram to find the Cournot firms' best response functions. Plot them. Use that to find the equilibrium levels of output for the two firms and the industry price. Explain how you did each step.

Figure #1

