

Place your name on the back of this sheet of paper and nowhere else. Staple your answers face up on the front of this sheet of paper. Failure to follow these directions will cost you 10 points. 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.

1) (15 points) For a perfectly competitive firm, why is $MR = P$? Why is all profit maximization done when $MR = MC$?

2) (45 points) Draw the S/D/MC/ATC/AVC diagram for a perfectly competitive firm which is making positive profits and beside it, the industry's supply/demand. Explain how you know they are making positive profits. Illustrate the effects of the industry's moving towards equilibrium. Explain why the curves on both diagrams move as drawn. Assume a constant cost industry.

3) (30 points) Draw the S/D/MC/ATC/AVC diagram for a perfectly competitive firm which is losing money but staying in business. Draw their losses and explain why those are the losses. Draw their losses if they shut down and explain why that is bigger.

4) (10 points) What is the shut-down price? Explain why that is the price.