

Homework Assignment #7

15 points

Due Date: Before the Final Exam on **Tuesday, May 13, 2014 (7:30-9:30am)**

**Instructions:** Make sure your answers are precise, complete and legible, with plenty of explanation for why you did what you did. If I can't read your answer, you won't get credit for it. Don't forget to label all items on graphs. Show all your work or points may be taken off.

1. (12 points) Tom, a wheat farmer, sells his wheat every Saturday at a farmer's market. There are many buyers and sellers of wheat at this market, so that we can assume it is competitive, with the market price,  $p$ , of wheat being \$20 per bushel. Tom's farm has a cost function described by  $C(q) = 7q^2 + 5q + 10$ .

- a) Write out the profit equation for the firm.
- b) Find the profit maximizing level of wheat ( $q$ ) that Tom should produce on his farm. **Hint:** use the  $p=MC$  rule.
- c) What is Tom's total revenue and total cost at the  $q$  you found in part (b)?
- d) What is Tom's profit at the profit maximizing output level? Is he earning positive economic profits?
- e) Calculate average variable cost for the firm and evaluate it at the  $q$  from part (b). Compare this result to the market price,  $p$ . Would Tom shut-down his farm in the short-run?
- f) In the long-run, would we expect to see entry or exist in this industry? Briefly explain your answer.

2. (3 points) Explain the differences between a monopoly firm and a perfectly competitive firm. Be sure to address each of the following in your answer:

- Prices each firm faces.
- Profit maximizing output condition.
- Provide at least two examples of monopoly firms (either historical or current). Look in the book or online for suggestions. Briefly describe the two firms. **Just naming two companies won't give you any credit.**
- Are monopolies always bad (i.e., do they always lower total welfare?) compared to perfectly competitive firms?