Econ 101 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Summer 2013

Quiz #4

Please write all answers neatly and legibly.

1. Suppose a perfectly competitive market has the following market demand and supply curves:

Market Demand: Q = 25,000 – 2500P

Market Supply: Q = 2000P - 2000

where P is the price per unit of the good and Q is the total quantity in this market. You are also told that the total cost and marginal cost functions for a representative firm in this industry are given by the following equations where q is the quantity produced by the firm:

Total Cost = TC = q + (1/50)q2 + 312.50

Marginal Cost = MC = 1 + (1/25)q

a. (1 points) What is the equilibrium price, P, and equilibrium market quantity, Q, in this market? For full credit show how you found your answer to this question.

b. (2 points) What is the quantity, q, produced by the representative firm? Assume that all firms in this industry are identical and face identical cost curves. For full credit show how you found your answer to this question.

c. (1 point) Given the above information, how many firms are in this industry? Show how you found your answer to get full credit for this question.

d. (2 points) Given the above information, calculate the value of economic profits for this representative firm. For full credit show how you found your answer to this question.

e. (4 points) Suppose that demand in this market increases by 9000 units at every price. Holding everything else constant, find the new short-run market quantity, Q’; the new short-run equilibrium price, P’; the new short-run quantity produced by the representative firm, q’; and the new level of economic profits in the short-run. Show your work for full credit and make sure it is easy for the grader to find your answers.