Economics 101   Name _____
Summer 2015
Quiz #4
June 17, 2015

Please write your answers neatly and legibly.

1. Consider a market that is comprised of two types of buyers whose demand curves are given by the following equations where P is the price per unit in dollars and Q is the number of units of the good:
    Demand for Type I buyers: P = 20 – (1/2)Q
    Demand for Type II buyers: P = 10 – (1/8)Q
    Suppose there is a single producer of this good and the producer's MC is given by the equation:
    MC = 2
    Assume that this producer has no fixed costs.

    a. (2.5 points) Suppose that this producer can treat this market as two separate markets: the market for Type I buyers and the market for Type II buyers. Given the above information, calculate the profit maximizing price for Type I buyers, the profit maximizing quantity for Type I buyers, the level of total revenue from Type I buyers, the level of total cost incurred in producing for Type I buyers, and the level of profits from this group of buyers. Show all your work for full credit. Put your answers in the provided spaces.

    Price to Type I buyers = _____
    Quantity to Type I buyers = _____
    Total Revenue from Type I buyers = _____
    Total Cost from Type I buyers = _____
    Profit from Type I buyers = _____

    b. (2.5 points) Suppose that this producer can treat this market as two separate markets: the market for Type I buyers and the market for Type II buyers. Given the above information, calculate the profit maximizing price for Type II buyers, the profit maximizing quantity for Type II buyers, the level of total revenue from Type II buyers, the level of total cost incurred in producing for Type II buyers, and the level of profits from this group of buyers. Show all your work for full credit. Put your answers in the provided spaces.

    Price to Type II buyers = _____
    Quantity to Type II buyers = _____
    Total Revenue from Type II buyers = _____
    Total Cost from Type II buyers = _____
    Profit from Type II buyers = _____

c. (5 points) Suppose that this producer is forced to sell this good to both Type I and Type II buyers as if they are a single market (the producer would be a single price monopolist in this case). Calculate the profit maximizing quantity if the producer combines these two types of buyers into one market. Then, calculate the profit maximizing price for this market, the total revenue for this single price monopolist, the total cost for this single price monopolist, and the profits for this single price monopolist. Show your work for full credit. Put your answers in the provided spaces.

Price if single price monopolist = _____
Quantity if single price monopolist = _____
Total Revenue if single price monopolist = _____
Total Cost if single price monopolist = _____
Profit if single price monopolist = _____