Your name (first name, then last name): ___________________________________

Your TA's name: ___________________________________

SUNY-Binghamton Economics 160, Principles of Microeconomics, Christopher Hanes
Problem set 7 Monopoly

1) Below is a portion of the demand schedule for a good.

Quantity Demanded	Price
3	188
4	184
5	180
6	176
7	172
8	168
9	164
10	160
11	156
12	152

a) Suppose the market for this good is perfectly competitive. The supply curve is perfectly elastic at a price of \$164. What will be the equilibrium quantity?

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b) Suppose the market for this good is monopolized - just one firm sells the good. The monopoly firm's marginal cost of producing the good is constant, always equal to \$164. What quantity will the firm choose to produce, what price will it charge, and what is its total revenue (assuming the firm cannot engage in price discrimination)?

Quantity: _______________ Price: __________________ Total revenue: __________________

c) Suppose the monopoly's average variable cost is constant, always equal to its marginal cost of \$164. If I tell you how much economic profit the firm is making, then you can figure out what the firm's *fixed cost* must be. Its economic profit is equal to \$10. What is its fixed cost?

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d) Consider consumer surplus in this market. If the market is initially perfectly competitive as in a), but then becomes monopolized as in b), does consumer surplus increase, decrease, or remain the same?

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2) Consider the gasoline market in two different countries (under autarky). The demand curves for gas are exactly the same in the two countries.

In Fredonia, the gas market is perfectly competitive. Entry and exit of new firms has *no effect* on the cost of inputs.

In Rockefelleria, the gas market is monopolized, because one firm has complete control of a key input (raw oil). Oddly enough, monopoly gas firm's marginal cost curve is exactly the same as the long-run supply curve in Fredonia. Also, the monopoly gas firm's average total cost curve is exactly the same as its marginal cost curve.

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In a graph below, draw curves that represent the gas market in Fredonia, in the long run. Draw the demand curve and the supply curve. Clearly mark the market price and the market quantity. Using a letter A, mark the area that represents consumer surplus. MAKE THE GRAPH NICE AND BIG.

In a graph below, draw curves that represent the gas market in Rockefelleria. Clearly mark the price that the monopoly gas firm will charge, and the quantity it will produce. Using a letter A, mark the area that represents consumer surplus. *Shade in* the area that represents the monopoly firm's economic profit. MAKE THE GRAPH NICE AND BIG.