* + - 1. a. Assume that a profit-maximizing firm in a perfectly competitive industry is earning economic profits. For a given market price, draw a correctly labeled graph and show each of the following for a typical firm in this perfectly competitive industry.

Marginal revenue

Output

Economic profits

* + - * 1. Using the information given in (a), draw correctly labeled side-by-side graphs for the industry and a typical firm.

Given the existence of economic profits of the typical firm, show on the graphs how the industry adjusts in the long run and explain the process that leads to the long-run equilibrium.

Show on the graphs each of the following for the industry and for the typical firm in long-run equilibrium: price, output

* + - * 1. Now assume that the government sets a price that is less than the equilibrium price but greater than average variable cost. Indicate how each of the following will change for the typical firm and explain why the change occurs.

Marginal revenue

Level of output

Short-run total cost

Short-run total revenue

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2. Callahan’s Orchard grows apples and operates in a constant-cost, perfectly competitive industry. Callahan’s Orchard is currently in long-run equilibrium.

a. Draw correctly labeled side-by-side graphs for the apple market and Callahan’s Orchard, and show each of the following.

 i. Market output and price, labeled as “Qm” and “Pm”, respectively.

 ii..Callahan’s output and price, labeled as “Qf” and “Pf”, respectively.

b. Now assume that the government provides farm support to apple growers by granting an annual lump-sum subsidy to all apple growers. Indicate the effect the subsidy would have on each of the following in the short run.

 i. Callahan’s quantity of output. Explain.

 ii. Callahan’s profit

 iii. The number of firms in the industry

 c. Indicate how each of the following will change in the long run as a result of the lump-sum subsidy.

 i. the number of firms in the industry

 ii. Price

 iii. Industry output