Microeconomics, Module 7: Competition, Short Run

Homework Assignment

(The attached PDF file has better formatting.)

Shutdown Price

We have the following information for a competitive firm:

Quantity	*Variable Cost*	*Fixed Cost*
1	9	10
2	14	10
3	18	10
4	21	10
5	25	10
6	33	10
7	42	10
8	52	10

Part A: What is the marginal cost at each quantity supplied? (The variable cost in the table above is the total variable cost. The marginal cost is the difference in total variable cost between N and N-1 units. Note that the marginal cost curve is U-shaped: It is high at Q = 1 and Q = 8, and it is low at Q = 4.)

Part B: What is the competitive firm's short-run shutdown price? (For a competitive firm, the shutdown price is the *minimum* average variable cost. Complete the table below, and find the price at the minimum average variable cost. The average variable cost has a minimum because the marginal cost curve is U-shaped.)

Quantity	*Variable Cost*	*Fixed Cost*	*Average Variable Cost*
1	9	10	
2	14	10	
3	18	10	
4	21	10	
5	25	10	
6	33	10	
7	42	10	
8	52	10	

Part C: What is the firm's *total profit* at this short-run shutdown price? (At the shutdown price, the total revenue collected just covers the total *variable* costs of production. The firm's profit is *negative* at this price.)

{*Note:* The first part shows the U-shape of the marginal cost curve; it is not necessary for the homework. The last two parts are sufficient for full credit.}