Assume that the cost data in the top table of the next column are for purely competitive producer:

Total Product Average fixed Cost Average Variable Cost Average Total Cost Marginal Cost

0

1 $60.00 $45.00 $105.00 $45

2 $30.00 $42.50 $72.50 $40

3 $20.00 $40.00 $60.00 $35

4 $15.00 $37.50 $52.50 $30

5 $12.00 $37.00 $49.00 $35

6 $10.00 $37.50 $47.50 $40

7 $8.57 $38.57 $47.14 $45

8 $7.50 $40.63 $48.13 $55

9 $6.67 $43.33 $50.00 $65

10 $6.00 $46.50 $52.50 $75

1. At a product price of $56, will this firm produce in the short-run? If it is preferable to produce, what will be the profit-maximizing or loss-minimizing out? What economic profit or loss will the firm realize per unit of output?
2. Answer the questions of 4a assuming product price is $41.
3. Answer the question of 4a assuming product price is $32
4. In the table below, complete the short-run supply schedule for the firm (column 1 and 2) and indicate the profit or loss incurred at each out (column 3).

(2) (4)

Quantity (3) Quantity

1. Supplied, Profit (+) Supplied

Price Single Firm or Loss (-) 1500 Firms

$26 $

$32

$38

$41

$46

$56

$66

1. Now assume that there are 1500 identical firms in this competitive industry; that is, there 1500 firms, each of which has the cost data shown in the table. Complete the industry supply schedule (column 4).
2. Suppose the market demand data for the product are as follows

Total Quantity

Demanded

Price

$26 17,000

$ 32 15,000

$ 38 13,500

$ 41 12,000

$ 46 10,500

$ 56 9500

$66 8000

What will be the equilibrium price? What will be the equilibrium output for the industry? For each firm? What will profit or loss be per unit? Per Firm? Will this industry expand or contract in the long run?