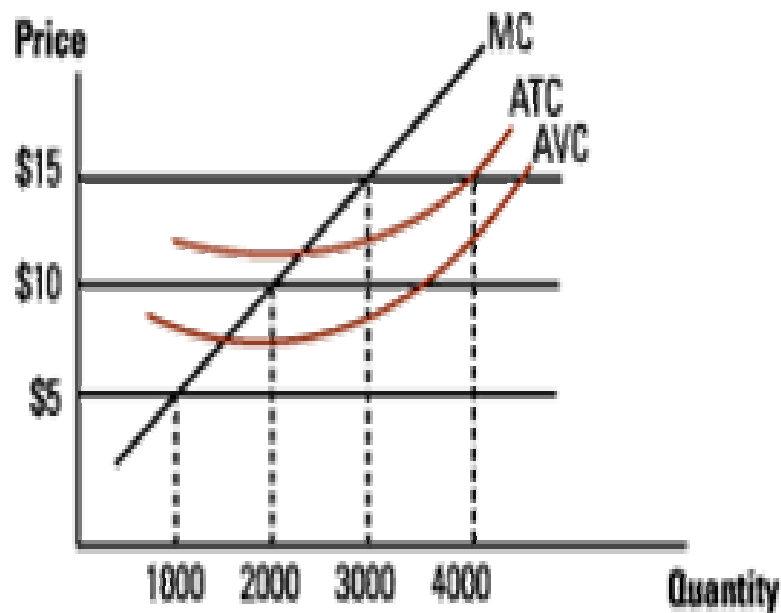


# Perfect Competition: questions # 1

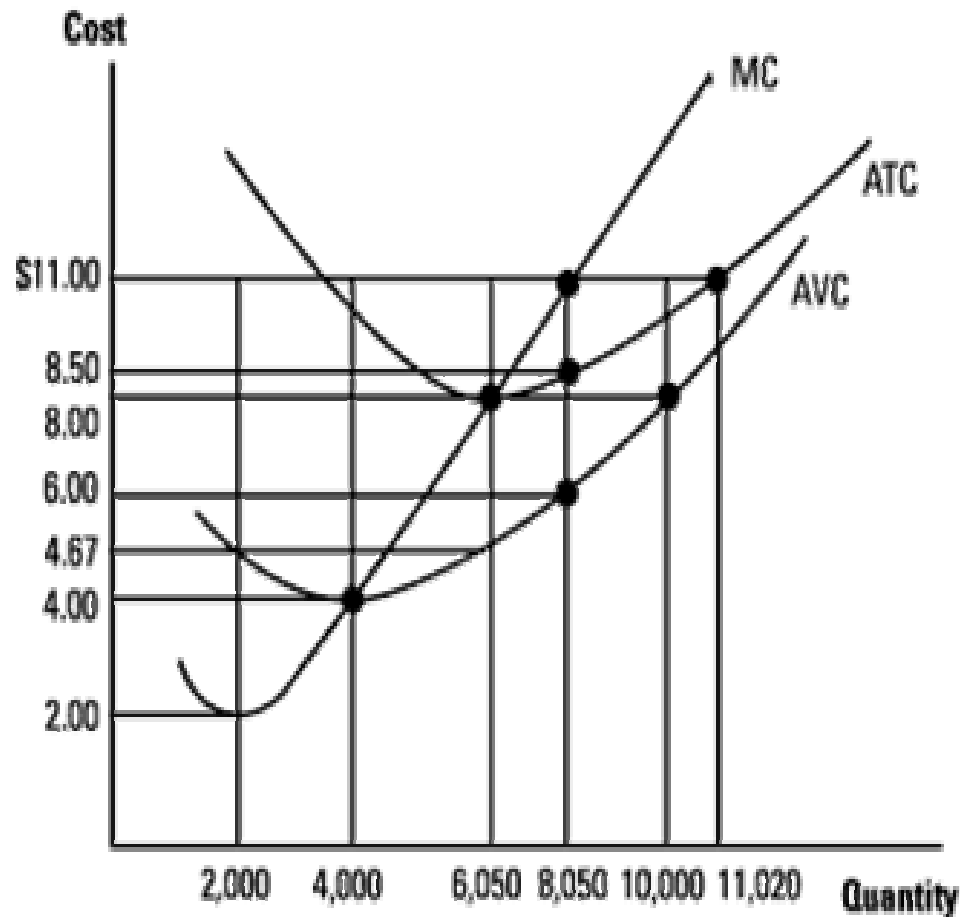


- 1) If the market price was set at 15 \$, what quantity should this firm produce?
- 2) If market price was set at 5 \$, what quantity should this firm produce?
- 3) Which of the 3 prices shown, would involve the firm experiencing losses?

# Perfect Competition : answers #1

- 1)  $Q^* = 3000$
- 2)  $Q^* = 0$  , since  $p < avc$ , the firm should **Shut Down**
- 3) **Losses are experienced if the market price is set at either 5 or 10 \$**

# Perfect Competition: questions #2



- 1) If price was set at 11 \$, then what is  $Q^*$ ?
- 2) At  $Q^*$ , what is average profit?
- 3) At  $Q^*$ , what is total profit?

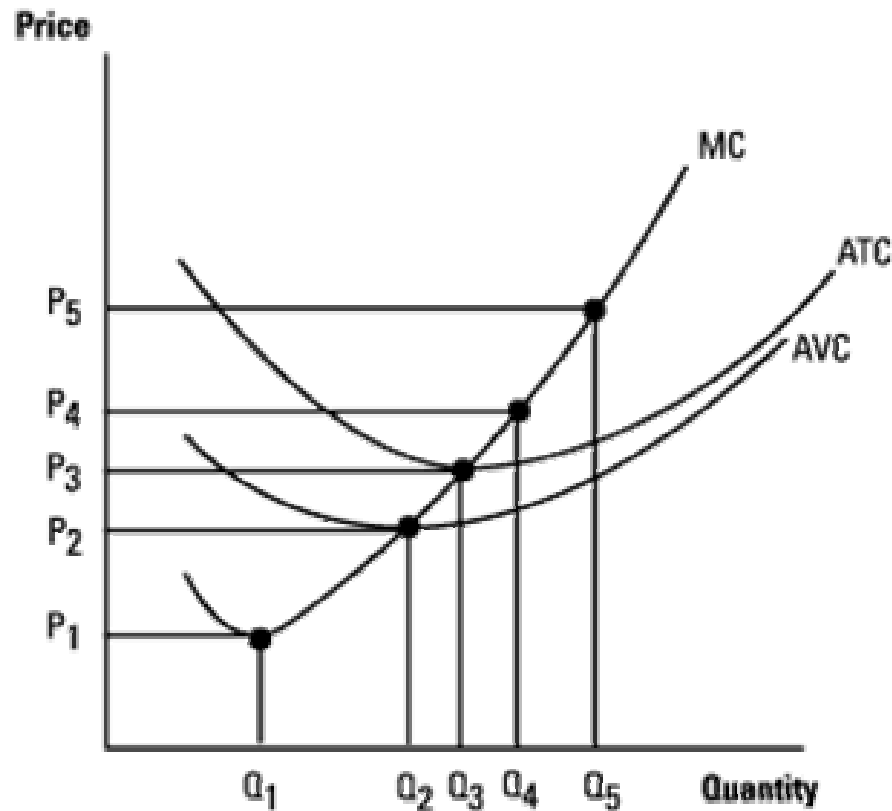
# Perfect Competition: answers #2

1)  $Q^* = 8050$

2)  $\text{Average Profit} = 2.5 \$$

3)  $\text{Total Profit} = \text{Avg. Profit} \times \text{Quantity}$   
 $= 2.5 \$ \times 8050 = 20,125 \$$

# Perfect Competition : questions #3

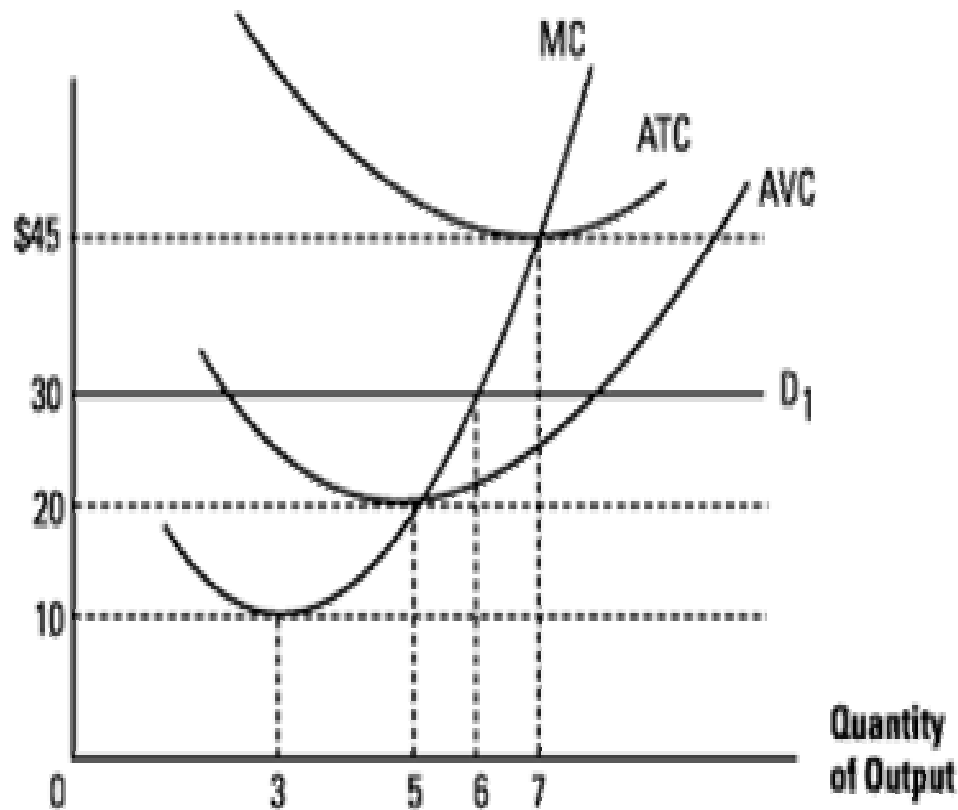


- 1) Of the price(s) shown, which correspond to profit maximization?
- 2) Which price(s) correspond to breaking even?
- 3) Excluding breaking even, which price(s) involve loss minimization?

# Perfect Competition: answers #3

- 1) If price was either P5 or P4, the firm would be maximizing profit by following the “RULE”
- 2) P3 corresponds to **Breaking Even**,  
because  **$P = ATC$**
- 3) Loss minimization occurs at either P2 or P1,  
because in each case, the **firm shuts down** and  
minimizes losses by **losing fixed costs**

# Perfect Competition : questions #4



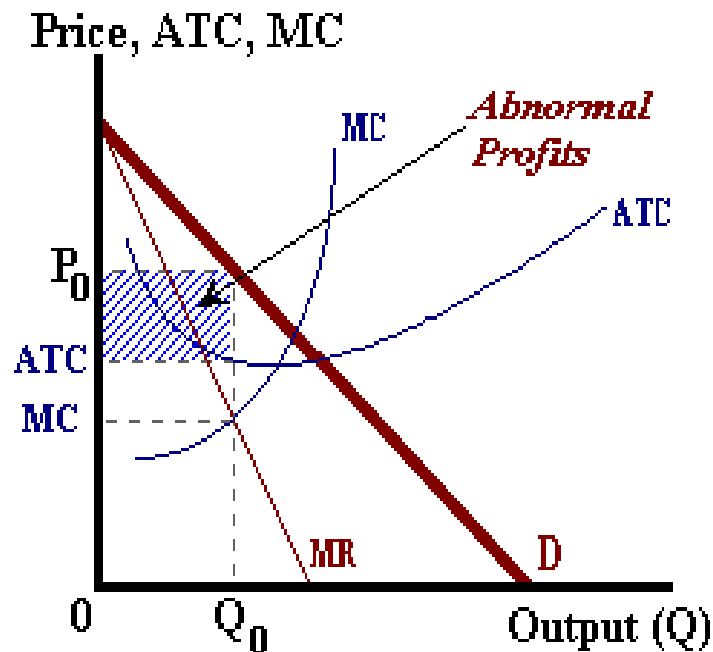
- 1) In this case, what is  $P^*$ ?
- 2) What is  $Q^*$ ?
- 3) At this optimal point, what is marginal revenue?
- 4) What is marginal cost?
- 5) How do you know this is a perfectly competitive firm?
- 6) Is this firm maximizing profit or minimizing losses?
- 7) What are the profit or losses in this case?

# Perfect Competition : answers # 4

- 1)  $P^* = 30 \$$
- 2)  $Q^* = 6$
- 3)  $MR = MC = 30 \$$
- 4)  $MR = MC = 30 \$$
- 5) Producer faces a perfectly elastic demand (horizontal)
- 6) Still following the “RULE”, but minimizing losses  
since  $AVC < P^* < ATC$
- 7) **Minimum Losses** = average loss x quantity

$$15 \$ \quad x \quad 6 \quad = \quad 90 \$$$

# *A Profitable Monopolist*



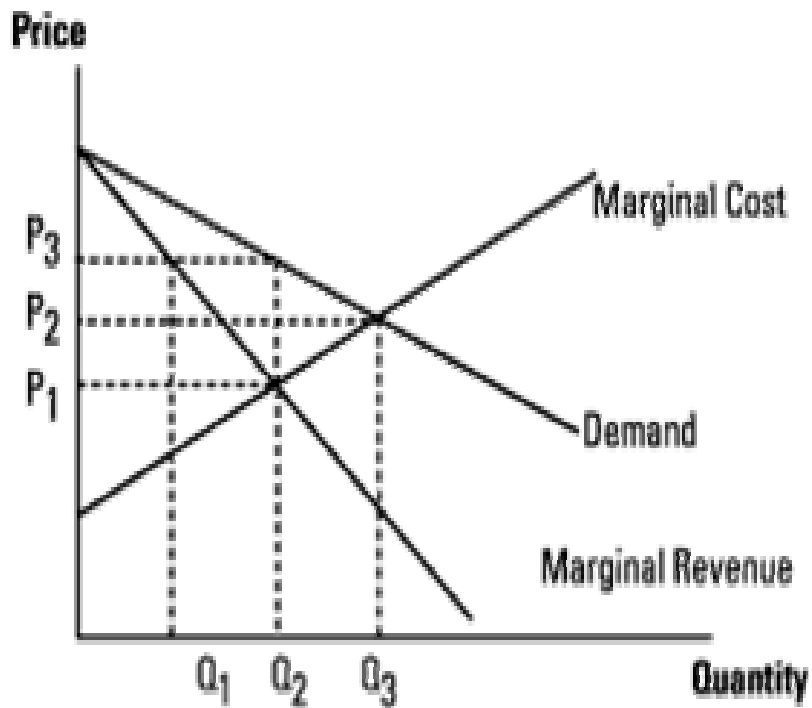
Produces a quantity where  
 $MR = MC$

Like all imperfect competitors :  
 $Price > MC = MR$

And because  $P > ATC$   
there is avg profit =  $P - ATC$

And Total Profit =  $(P - ATC) Q$   
The **blue shaded** rectangular  
area in the diagram

# Imperfect Competition : questions #1

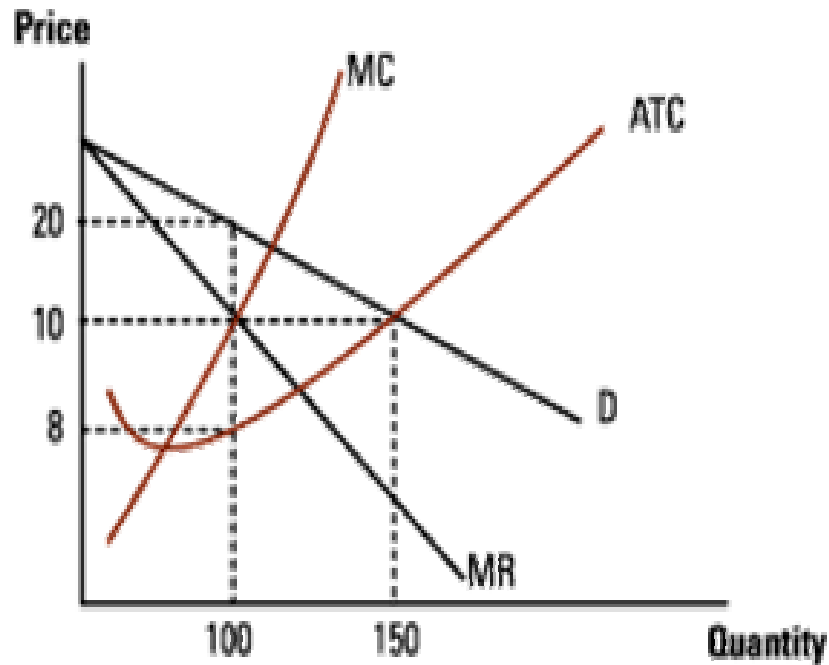


- 1) Of those shown, which is the optimal price?
- 2) Which is the optimal quantity?
- 3) Which price & quantity combination approximates the results in a perfectly competitive market?

# Imperfect Competition : answers #1

- 1) **Optimal price is P3**
- 2) **Optimal quantity is Q2**
- 3) **To approximate perfect competition, the  $p = mc$  :  
so the answer is: P2, Q3**

# Imperfect Competition : questions #2

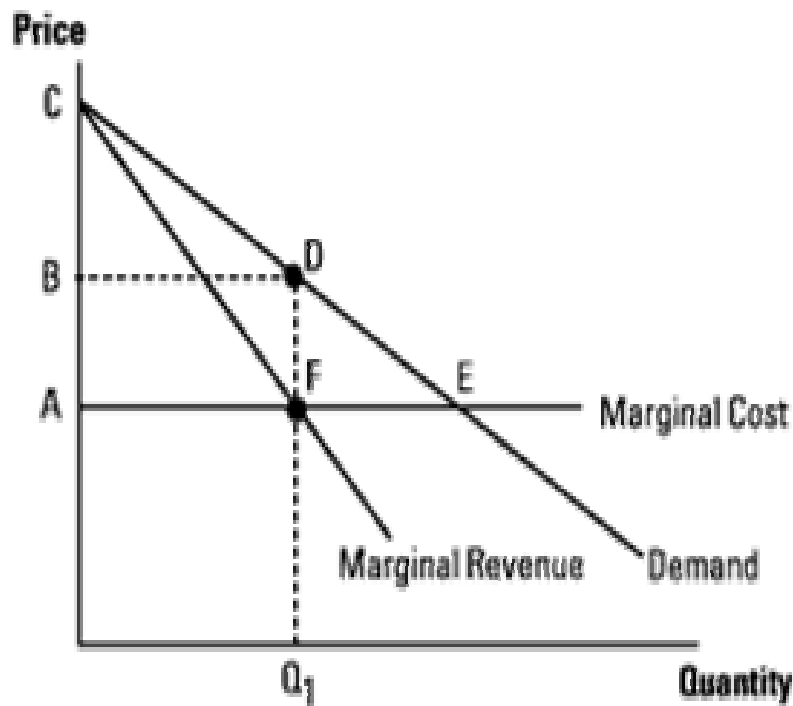


- 1) In this case, what are  $P^*$  &  $Q^*$  ?
- 2) What is TR at (  $P^*$ ,  $Q^*$  ) ?
- 3) What is TC at (  $P^*$ ,  $Q^*$  ) ?
- 4) In this case, what is the largest Total Profit?

## Imperfect Competition : answers #2

- 1)  $P^* = 20$  ,  $Q^* = 100$
- 2)  $TR = 2000$ , because it equals  $P(Q) = 20(100)$
- 3)  $TC = 800$ , because it equals  $ATC (Q) = 8 (100)$
- 4)  $\text{Profit} = 1200$ , because it equals  $TR - TC$

# Imperfect Competition : questions #3

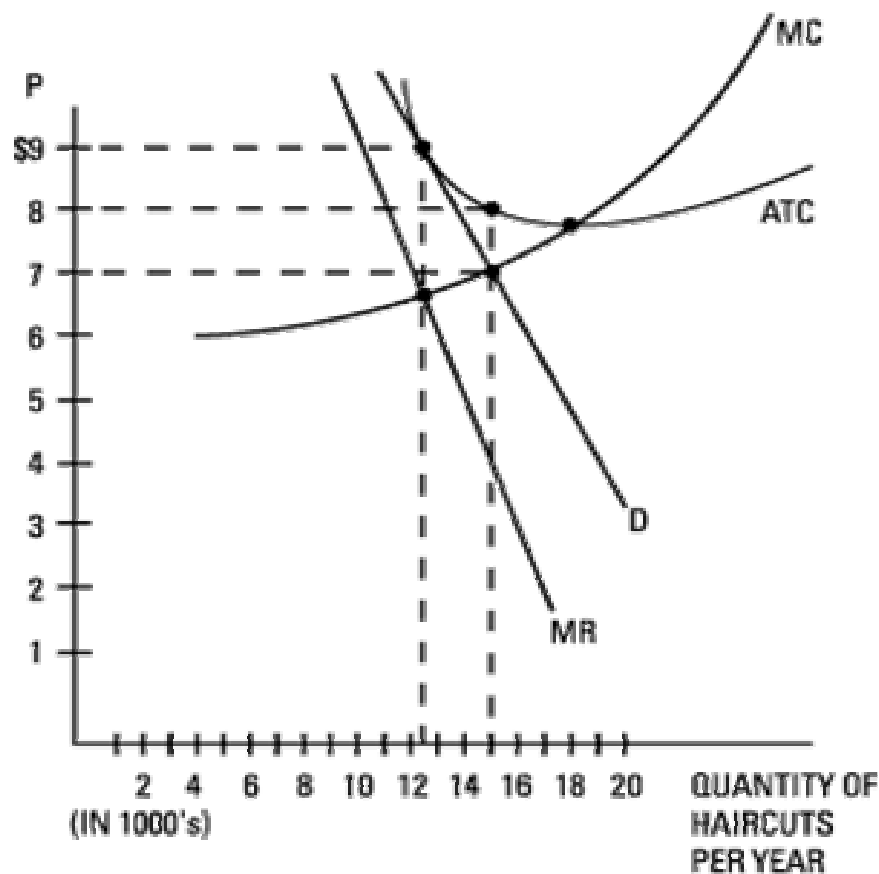


- 1) If there were NO fixed costs, then what would be true of ATC in this case?
- 2) Which geometric figure corresponds to total profit ?
- 3) Which geometric figure corresponds to the deadweight loss of having an imperfectly competitive market?

## Imperfect competition : answers #3

- 1) **MC = ATC, since MC is constant in this case**
- 2) **Rectangle ABDF**
- 3) **Triangle DFE**

# Imperfect Competition : questions # 4



- 1) In this market, how many haircuts are given in a year?
- 2) What is the price of a haircut ?
- 3) What is the profit of the Barbers ?
- 4) What is the commonly used term to describe this situation?

# Imperfectly Competition : answers # 4

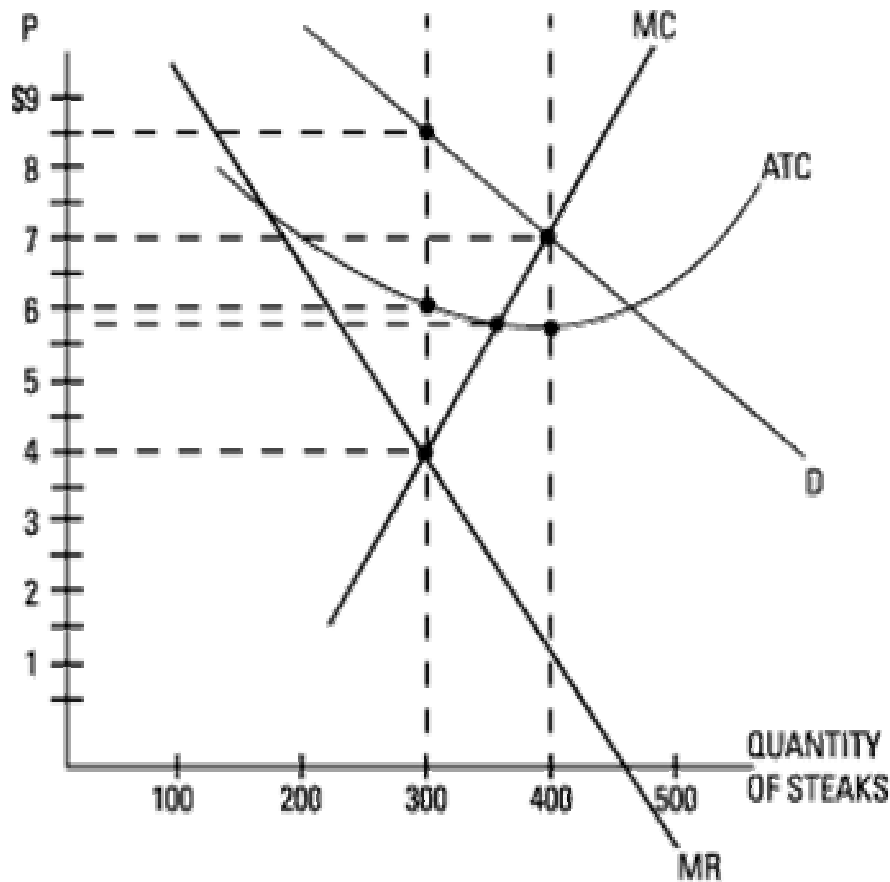
1)  $Q^* = 12,500$  haircuts

2)  $P^* = 9$  \$

3) Profit = 0

4) Breaking Even

# Imperfect Competition : questions # 5



- 1) How many steaks will be sold in this case?
- 2) What is the price of steaks?
- 3) What is the average profit?
- 4) What is the total profit?

# Imperfect Competition : answers #5

1)  $Q^* = 300$

2)  $P^* = 8.50 \$$

3) **Average Profit = 2.50 \$, because it equals**  
 $P - ATC = 8.5 \$ - 6 \$$

4) **Total Profit = 750 \$, because it equals**  
**average profit (Q) = 2.5 \$ (300) = 750 \$**