

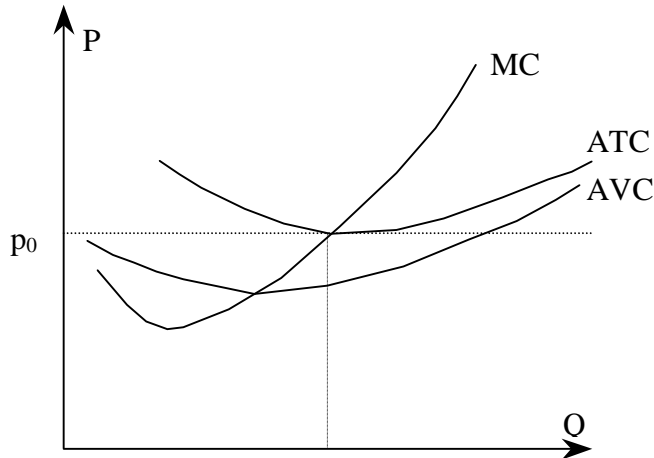
Monopoly:

The shutdown condition: $p < \min AVC$

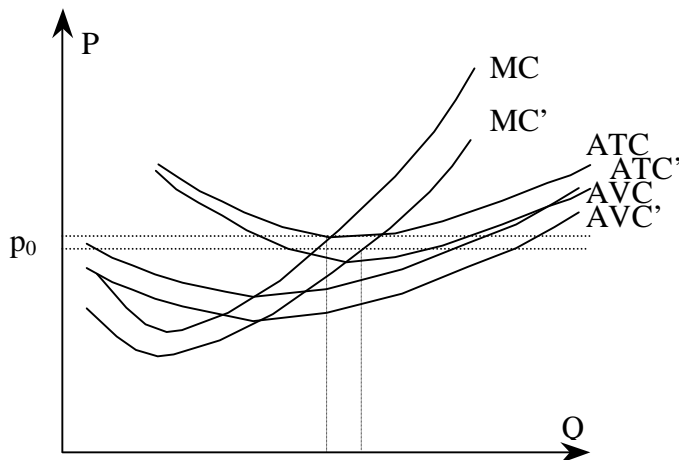
Leave market condition: Economic profits $< 0 \implies \text{economic } \min ATC > p$

Perfect Competition : the firms are price takers.

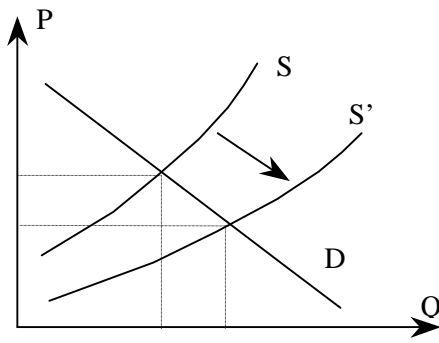
In Long Run Equilibrium all firms in a perfectly competitive industry make zero economic profits. $p = \min ATC = MC$.



If labor costs go down by 10% for every firm in the market, (labor being the only variable costs) then the ATC, changes, and the $p > \min ATC$ for a while.



At first the price would be at $\min ATC$, and in the short run the price and $\min ATC$ would be such that $p > \min ATC$. So now firms are making positive economic profits. So more firms would enter the industry and supply would shift left until price equals $\min ATC$.



The supply curve shifts right and the price goes down to the new minATC as new firms enter the market.

There would be entry until $p = \text{new minATC}$. Q per firm goes back to where $\text{minATC} = \text{MC} = p$. The price goes down in the long run.

Monopoly

In a monopoly the firm is **not** a price taker, the firm's supply curve is the market supply curve. Suppose that the following are the demand and total costs for a monopolistic firm.

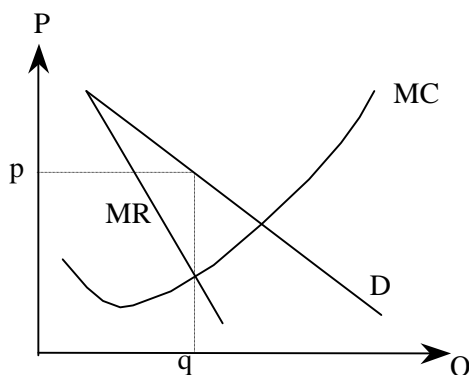
Quantity	Price	Revenue	MR	Total Cost	MC
1	24	24	24	6	6
2	21	42	18	15	9
3	18	54	12	27	12
4	15	60	6	42	15
5	12	60	0	60	18
6	9	54	-6	81	21
7	6	42	-12	105	24
8	3	24	-18	132	27

Supposing that the MC for the firm is supply curve for the industry in a perfectly competitive market what would the price in the market be?

Marginal Revenue:

Marginal revenue is the change in total revenue that occurs if you produce one more unit. For a monopolist this is a downward sloping curve, in a competitive industry the MR for each firm is just the difference in price, it is more complicated when it is a monopoly.

To maximize profit a monopolist would chose to sell where $\text{MR} = \text{MC}$. This is because if $\text{MR} > \text{MC}$, then it could produce one more unit and sell it for profit. If $\text{MR} < \text{MC}$ then it cost more money to produce than the increase in revenues.



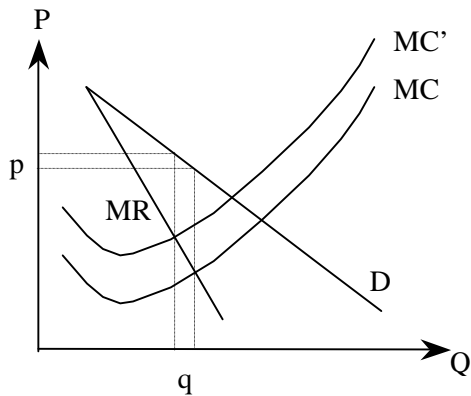
So in the example above what would the price charged by the monopolist be?

_____.

Suppose that a per unit tax of \$9 is imposed on the monopolist. What then would the new equilibrium be?

_____.

The tax did not increase the price by as much as the tax quantity.



Quantity	Price	Revenue	MR	Total Cost	MC
1	20			10	
2	18			21	
3	16			33	
4	14			46	
5	12			60	
6	10			75	
7	8			91	
8	6			108	

Suppose the monopolist above is maximizing revenues, what quantity and price would the monopolist charge?

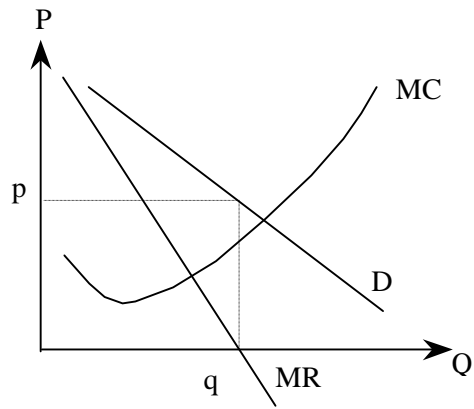
_____.

What are its profits? (R-TC)

_____.

Suppose the monopolist has to make a minimum profit of \$-20 how would that affect the output? _____.

What if there is a minimum profit of \$10 how would that affect output, if the firm is trying to maximize revenue? _____.



At the revenue maximizing quantity $MR=0$. By decreasing quantity since $MC > MR$ the monopolist will increase profits.