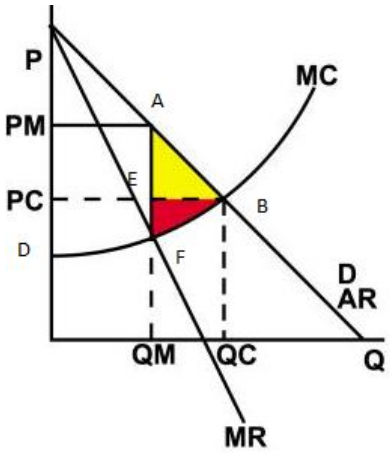
## SOCIAL COST OF MONOPOLIST:

P=MC : in perfectly competitive market
MR=MC : in monopoly market

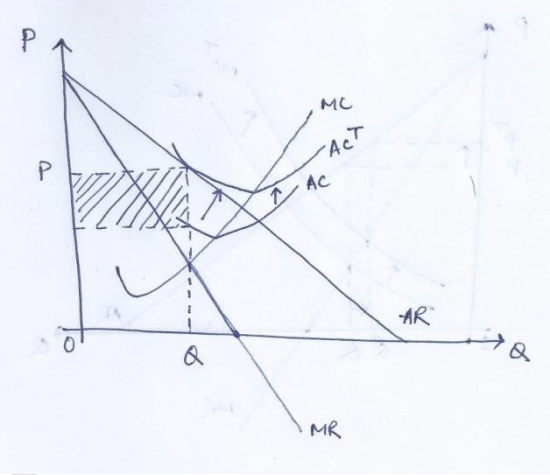



Monopoly price is greater than perfectly competitive price with lower output. MC is supply curve of perfectly competitive market. Consumer Surplus (CS) is the area above price line & below demand curve. Producer Surplus (PS) is the area below price line & above supply curve.
Loss in CS due to monopoly market is PMABPC out of it PMAEPC area is monopolist's sales revenue.
Loss in PS due to monopoly market is EBF
So, Monopoly sales revenue is PMAFD (below monopoly price & above MC curve area)
Dead weight loss (DWL) due to loss to CS is ABE
Dead weight loss (DWL) due to loss to PS is EBF
Total DWL= ABF which is social cost of monopolist that never comes back to the society. So it is net loss to the society.

## MONOPOLY TAXATION:

### 1. IMPOSITION OF LUMPSUM TAX (T):

Let lump sum tax= T which is positive & constant
Before imposition of tax, TC= W.L+R.K
After imposition of tax, TC=W.L+R.K+T
Profit, π= TR-TC
dπ/dQ= 0 = d(TR)/dQ - d(TC)/dQ
=MR-MC=0
MR=MC
Monopoly equilibrium is unaffected
Before imposition of tax, AC=TC/Q
After imposition of tax, AC=(TC+T)/Q=TC/Q+T/Q=AC+T/Q
Here MC will remain unchanged but AC will shift by amount of lumpsum tax & therefore supernormal profit reduces to normal profit



## 2. IMPOSITION OF UNIT TAX(T=t.Q):

If government imposes an unit tax on per unit of output then T=t.Q where 0<t<1

Before imposition of tax, TC=W.L+R.K

After imposition of tax, TC=W.L+R.K+t.Q

Profit, π= TR-TC

dπ/dQ= 0 = d(TR)/dQ - d(TC)/dQ

= d(TR)/dQ-d(W.L)/dQ-t.dQ/dQ=0

=MR-MC-t=0

=MR=(MC+t)

This is the equilibrium condition after imposition of unit tax

As MC increases to $MC^t$ then equilibrium condition changes & price increases to $P^t$ & quantity decreases to $Q^t$