Cournot Model of oligopoly:

Base: Duopoly (for 2 firms)

Oligopoly: for few firms

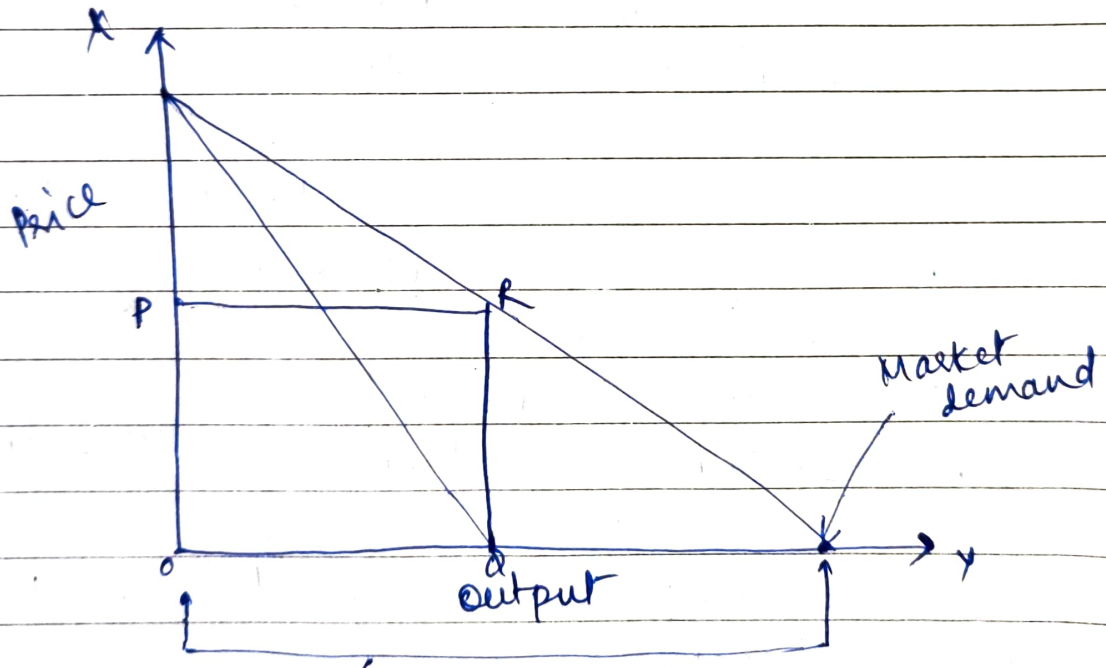
Assumption:-

→ firms are competing

→ producing identical or homogeneous products (eg: Mineral water)

→ cost assumed as 0.

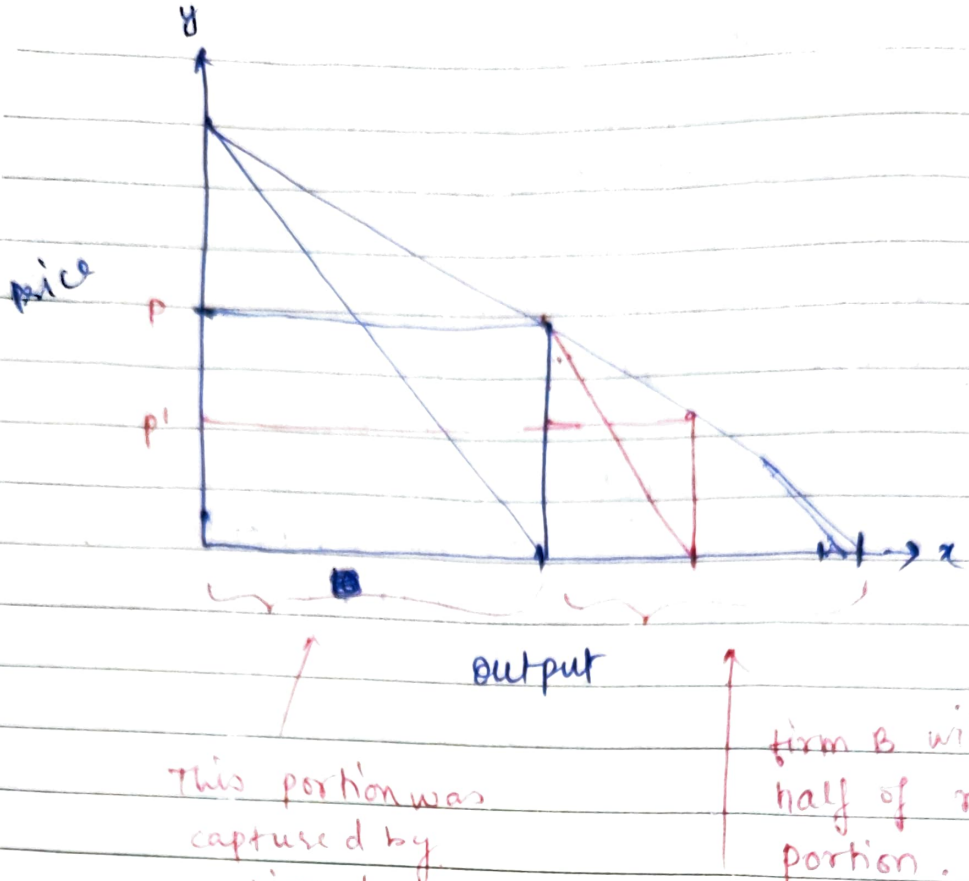
*→ firm will produce half of market demand
{because if firms will produce more, price will decrease so firms produce half of the market demand}



consider market demand = 100

firm A producing half of Market demand = 50
OQ portion of the o/p is captured by firm A.

Now firm B comes into the market.



As B came into market price has reduced from P to P' because O/P has increased.

→ Now A wants to increase the price again.

→ So, A figures out what portion of market he has:

Total = 100, B producing = 25

so A can produce = $\frac{1}{2}(100-25) = \frac{75}{2} = 37.5$

Now price has been increased again to some extent.

→ Now B : $\frac{1}{2}(100 - 37.5) = \frac{62.5}{2} = 31.25$ (A's portion)

A = $\frac{1}{2}(100 - 31.25) = 34.375$

B = $\frac{1}{2}(100 - 34.375) = 32.815$

	firm A	firm B
o/p →	50	25
	37.5	31.25
	34.375	32.815
	33.5925	33.20375

This keeps going on untill both the firms get o/p as 33.3.

firm A	firm B	Remaining ↓
33.3	33.3	33.3

So Always one portion is remained empty

$A = \frac{1}{2}(100 - 32.815) = 33.5925$

$B = \frac{1}{2}(100 - 33.5925) = 33.20375$

So for few firms always one portion of demand will be kept empty.

Eg: If there 4 firms, then $\frac{100}{5}$ part output will be produced by each firm and one portion will remain empty.