Chapter 11 pure competition in the short Run

(*) Market structures :-

(1) pure compitition → سوق المنافسة التامة

(2) pure monopoly → سوق الاحتكار التام

(3) Monopolistic compitition → سوق المنافسة الاحتكارية

(4) Oligopoly → سوق احتكار القلة

(*) pure compitition : سوق المنافسة التامة

* الخصائص :-

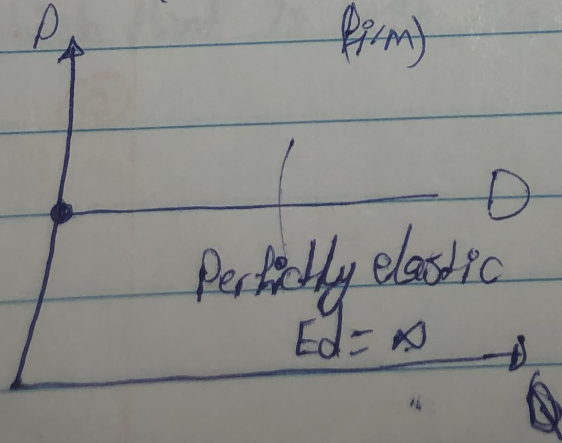
* عدد المنتجين كبير جداً .

* السلع التي يتم انتاجها هي سلع متجانسة (متطابقة تماماً)

* حرية الدخول والخروج لهذا السوق

* price taker : عدم القدرة على التحكم بالسعر.

المنتج ملزم والقدرة على التحكم بالسعر (الذي يتحكم بسعر السلعة هو السوق نفسه) .



✱ Total Rev (TR), Average Rev (AR), and Marginal Rev (MR).

- Total Rev = $P * Q$
- Average Rev (AR) $= \frac{TR}{Q} = \frac{P*Q}{Q} = P$
- Marginal Revenue = MR $\rightarrow \frac{\Delta TR}{\Delta Q}$
  - Additional Revenue from selling one more unit

$$MR = \frac{\Delta TR}{\Delta Q} = \frac{\Delta Q * P}{\Delta Q} = P$$

For pure compitition:

$$\boxed{AR = MR = P}$$

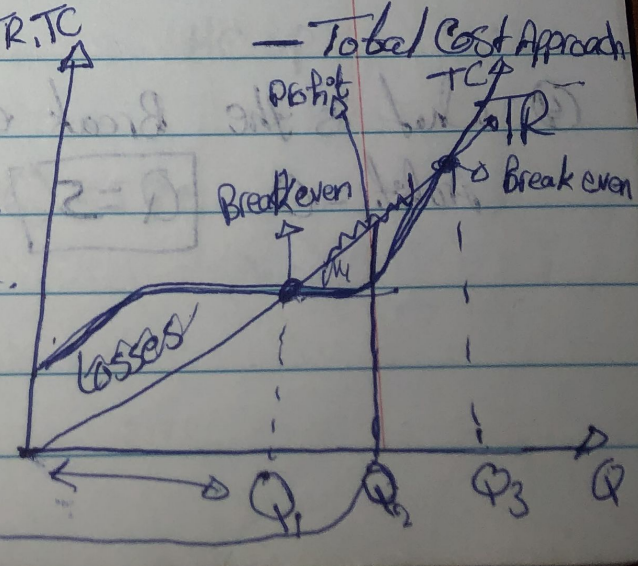
✱ Profit Maximization in the short run: total Rev

Profit = Total Rev − Cost.

$TR = P*Q$

$TR > TC \rightarrow$ Profit.

$TC > TR \rightarrow$ Losses



اعلى قيمة للربح.

example: Assume that a purely Competition from has the following data:-

Output(Q)	TR (P*Q)	TC مجموع التكاليف	profit (TR-TC)
1	200	250	200 - 250 = -50
2	400	300	100
3	600	450	150
4	800	700	100
5	1000	1000	0
6	1200	1400	-200

① Assume a market price (P) is $200, fill in the colomns in the above table.

② what is the profit Maximization Outputs?

3 ~~150~~ له اعلى قيمة للارباح ←

بنشوف اعلى قيمة للارباح و بمشي لعند الي قبالها outputs.

③ What is the form ~~maximization~~ Maximum profit?

150

④ what is the Break even point?

Profit = 0 Q = 5

⊛ Profit maximization : Marginal Rev = Marginal cost

* to max profit. MR = MC.
→ if MR > MC → Increase production to Increase profit.
→ if MR < MC → decrease production to Increase profit
→ If MR = MC → The firm Maximizing profit.

Example

Q	AFC	AVC	ATC	MC
3	100	70	170	60
4	75	73	145	80
5	60	80	140	110
6	50	90	140	140
7	43	103	146	180
8	38	119	156	230
9	33	138	171	290

Profit = TR − TC
AR = MR = P

① If the Market price of the firm is 230$, what will be the profit Maximization output, what economic profit or losses for firm relize?

⇒ to Maximize profit MR = MC , MC = P
out put profit Q = 8
Profit = Q(P − ATC) = 8 (230 − 156) = 592.

② what is the BE (⇒ Break even.) output?

at Break even : MC = ATC

Q = 6 when MC = ATC = 140

③ If Market price decrease to $110 : Should the firm still produce or shut down?

profit = Q (P − ATC)

* P > ATC ⇒ profit
* P < ATC ⇒ losses

but P > AVC still produced

If P < ATC & P < AVC ⇒ shutdown.

P = MC at Q = 5

ATC = 140 AVC = 80

P < ATC ⇒ losses
(110) (140)

but P > AVC ⇒ still produced

④ If market price to $60 : Should the firm still produced or shutdown? P = MC at Q = 3

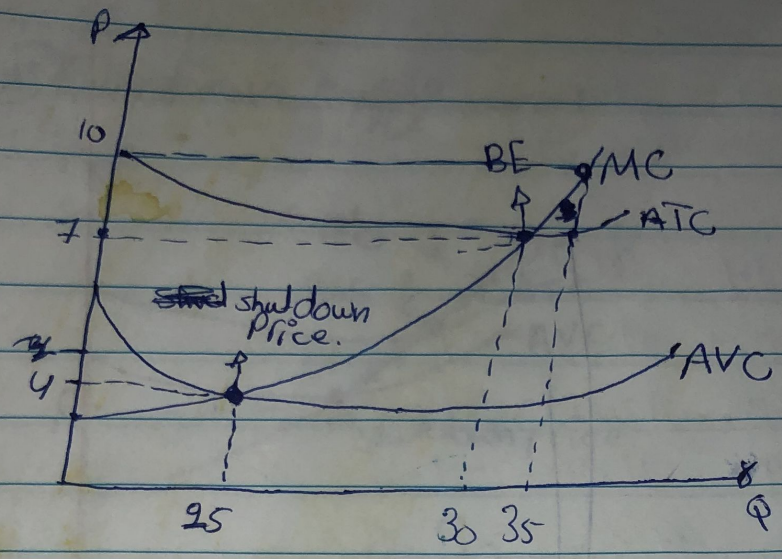
ATC = 170 AVC = 70

P < AVC
60

60 < 170 ⇒ losses

P < AVC
60 70
shutdown

Losses = TFC * Q = 100 * 3 = 300



① If Market price is 10, what output should the firm produce to max profit? what is the economic profit the firm relize?

at $P = 10$ $Q = 35$

to Maximum profit $P = MC$.

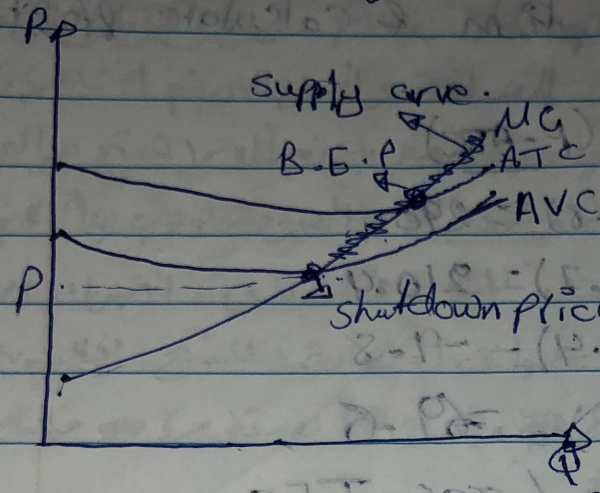
$$\text{Profit} = Q(P - ATC)$$
$$= 35(10 - 7)$$
$$= 35(3) = \$105$$

② What is the B.E out put?

B.E:- $MC = ATC$ $Q = 30$.

③ what is shutdown price? shutdown price is $MC = AVC$ at $Q = 25$

(4) Short run supply curve:-



→ supply curve: MC curve above minimum AVC.

Example

Q	AFC	AVC	ATC	MC
4	25	75	100	60
5	20	75	95	70
6	16.6	75	91.6	80
7	14.3	77.14	91.4	90
8	12.5	81.25	93.7	100
9	11.11	86.6	97.8	130
10	10	93	103	150

* The table below, complete the Short Run supply scheduel for the firm & calculate profit:-

Price	Qs	profit = Q(P-ATC)
130	9	9(130-97.8) = 290
116	8	8(116-93.7) = 210.4
90	7	7(90-91.4) = -9.8
80	6	6(80-91.6) = -69.6
70	0	losses = TFC

Shutdown

do Maximize profit : MC = P

The producer should shut down if: P < Minimum AVC

P < 74

* TFC = AFC * Q

= 20 * 5

= 100