Unit 10

Perfect Competition

Economics - 6th year

EURSC

2007/2008

Assumptions on Perfect Competition

What is Perfect Competition

- Markets are “perfectly compeitive” if
  - There are many buyers and sellers so that none has influence on price.
  - There is freedom of entry and exit (in the long run)
  - There is perfect knowledge of prices by buyers and sellers and agents are **symmetric** respect to information.
  - All firms produce an homogenous and identical products. No branding or other marketing techniques of price discrimination.

Assumptions on Perfect Competition

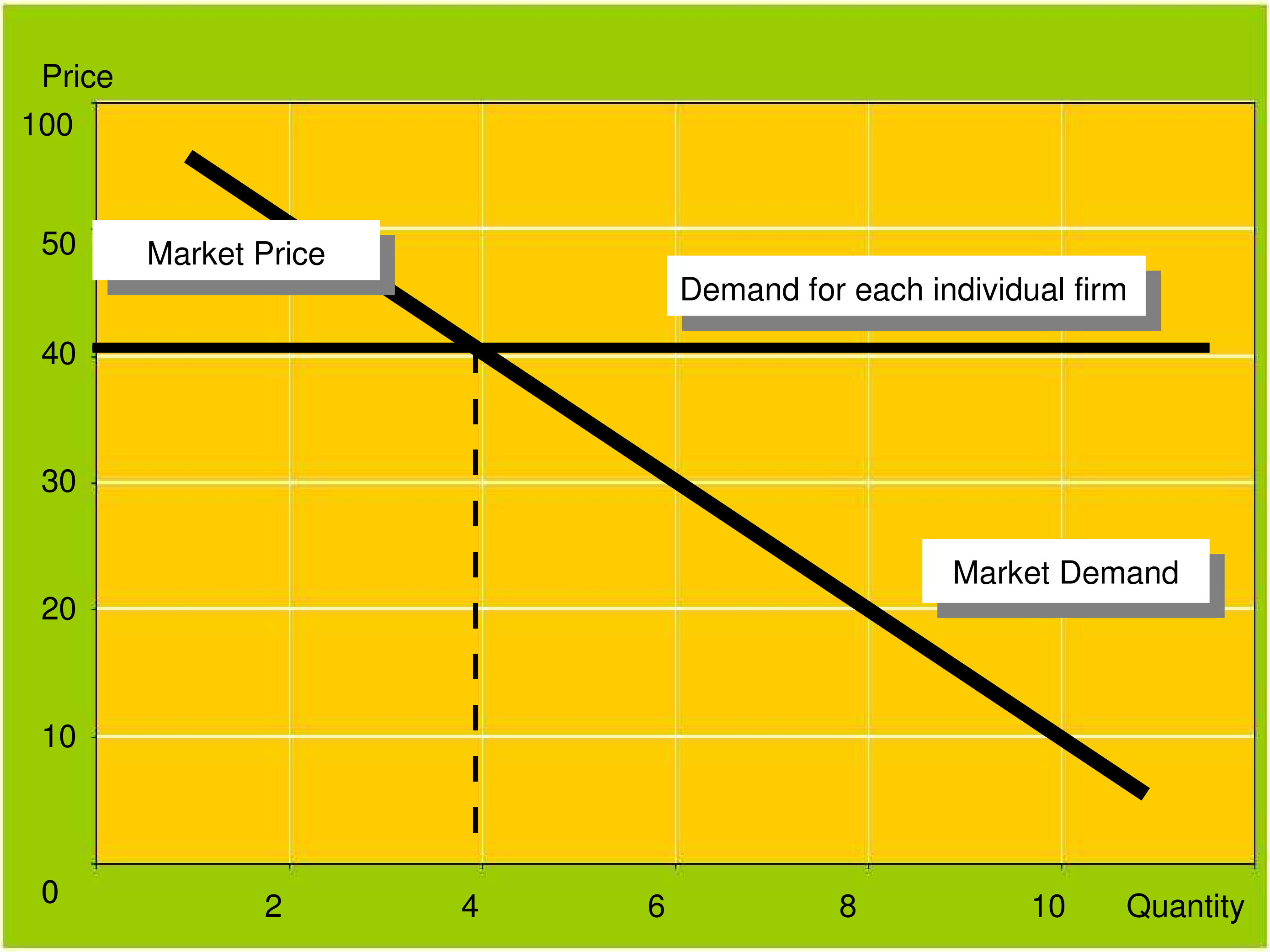
Examples of Perfect Competition Markets

- The market for some agricultural produces (wheat, corn, soya beans).
  - Many sellers but a few buyers
  - Marketing techniques and branding (certificates of origin)
- The stock exchange market.
  - Asymmetries in the information
- The e-bay auctions
  - Asymmetries in the information
  - Branding, part-sales and other marketing techniques.
- The fully-competitive market DOES NOT exist!!

Assumptions on Perfect Competition

The individual and market demands

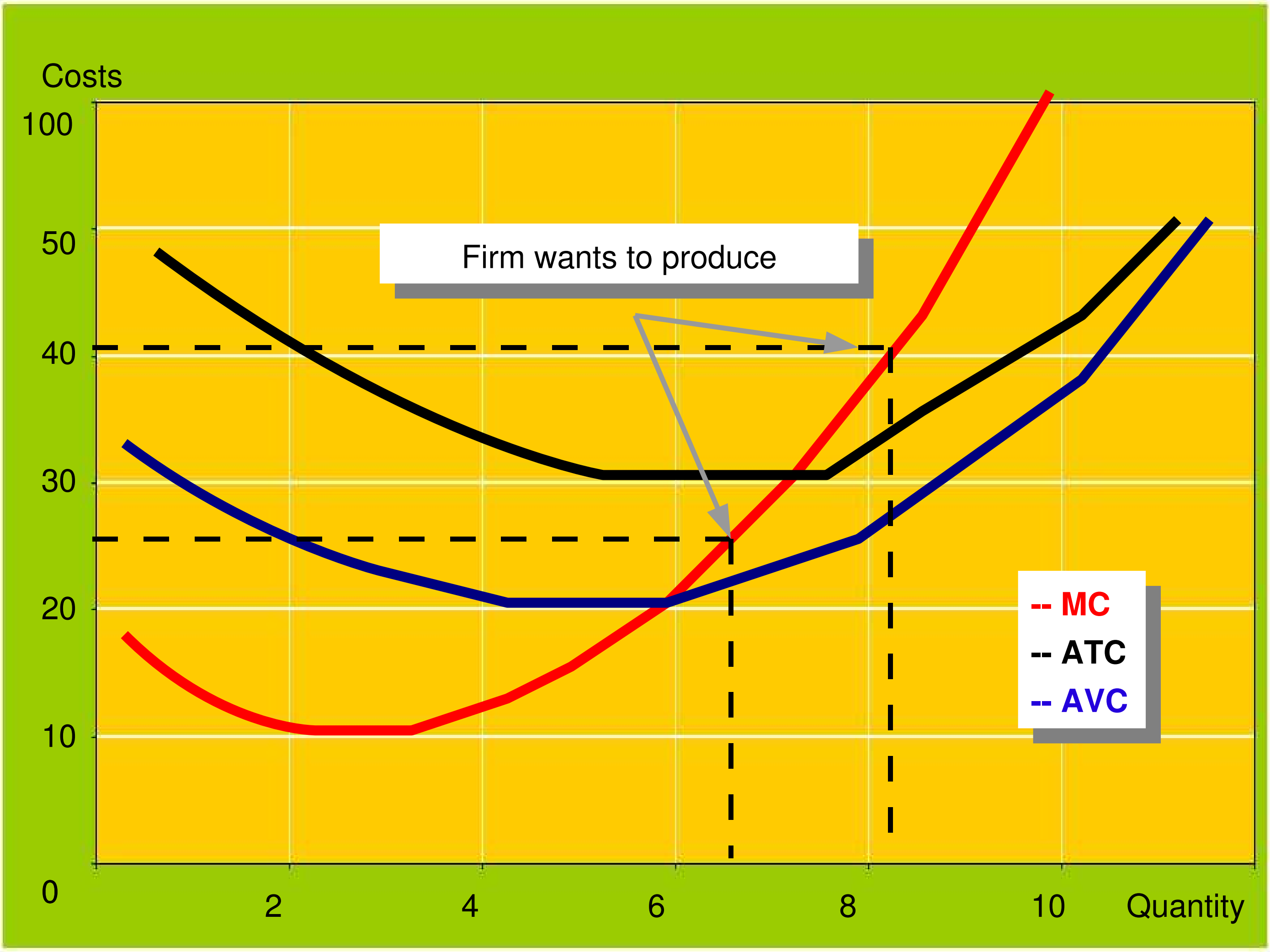
- The impact of individual firm decisions on total output is negligible in a perfect competition market.
- Firms cannot affect price by increasing or decreasing output
- A distinction is made between market demand and demand faced by an individual firm.
  - Market demand is as always negative slope
  - Demand faced by an individual firm is an perfectly elastic (horizontal line)
- Thus, a firm in perfect competition can sell all the output it can produce at the current market price.

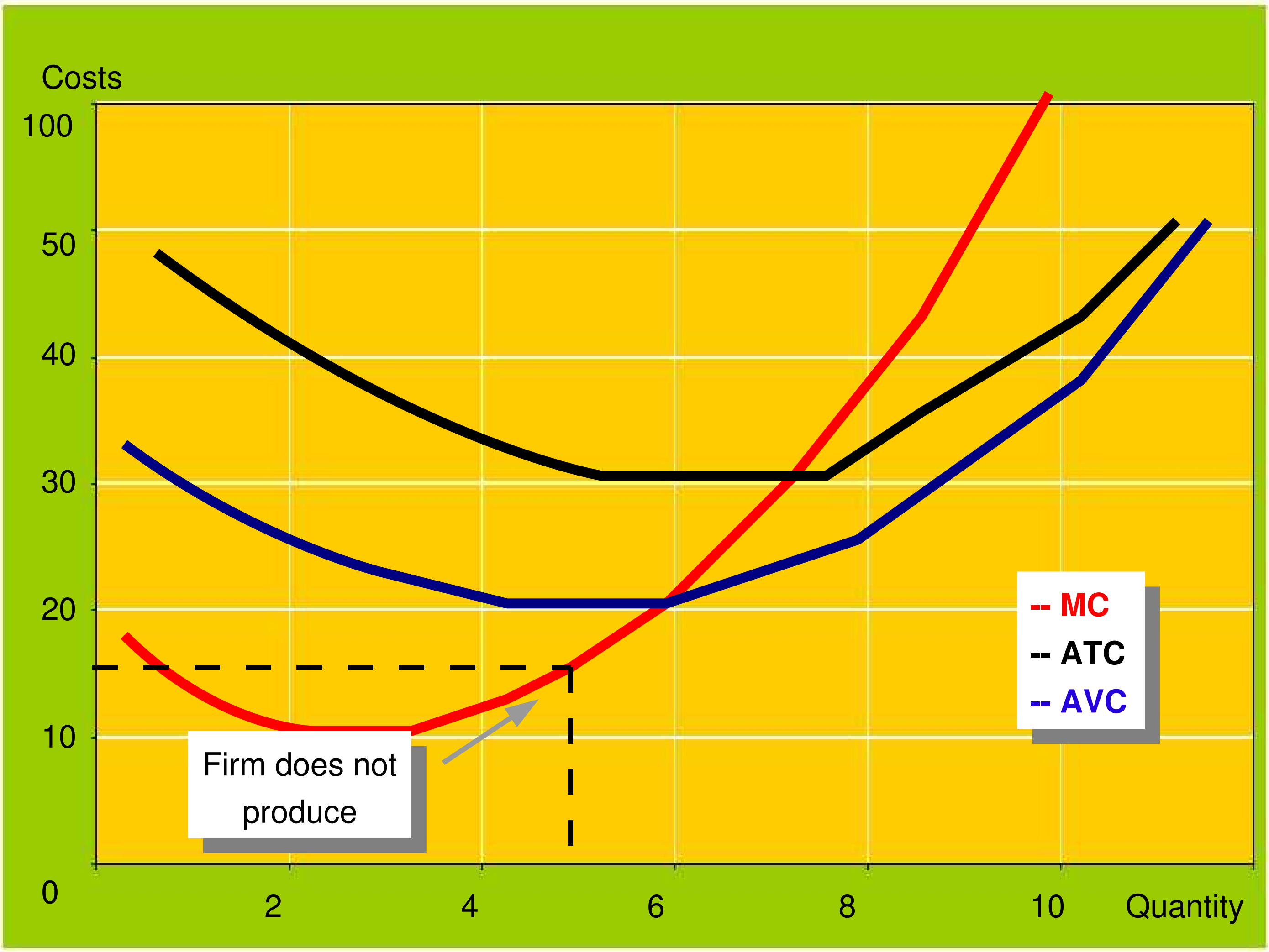


The Short-Run Equilibrium

Individual Offer Curve

- We showed that the individual offer curve is given by the marginal cost curve.
- . . . but only as long as the firm wants to keep producing
  - If the MC is above the AC, the firm gets positive profits.
  - If the MC is below the AC but above the AVC, still the firm wants to produce
  - The firm wants to stop producing if they cannot even afford variable costs (MC below AVC).
- Thus, the individual offer curve is the part of the MC above the AVC.


Costs
100
50
40
30
20
10
0
2
4
6
8
10
Quantity
Firm wants to produce
-- MC
-- ATC
-- AVC

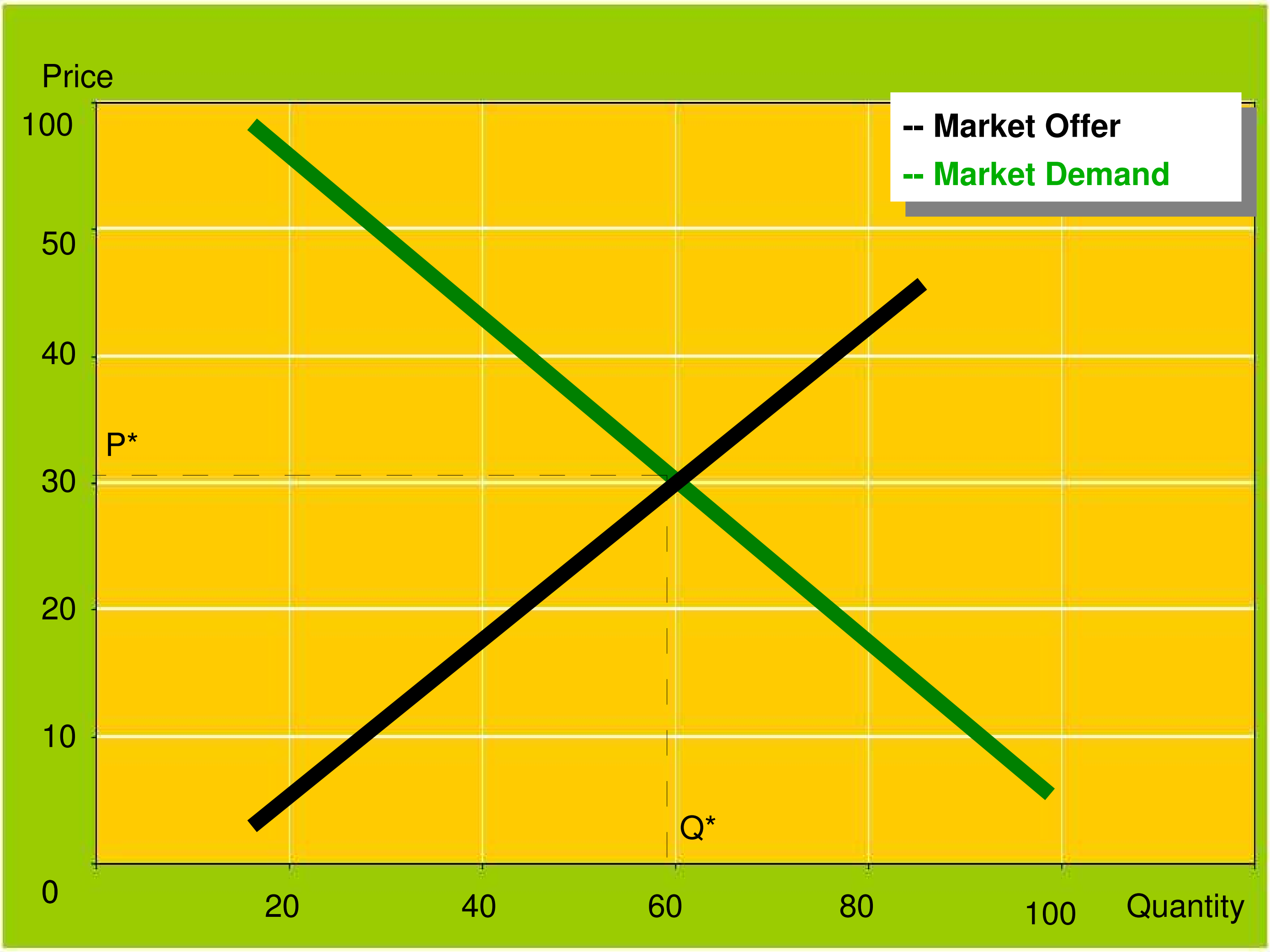

Costs
100
50
40
30
20
10
0
2
4
6
8
10
Quantity
Firm does not produce
-- MC
-- ATC
-- AVC

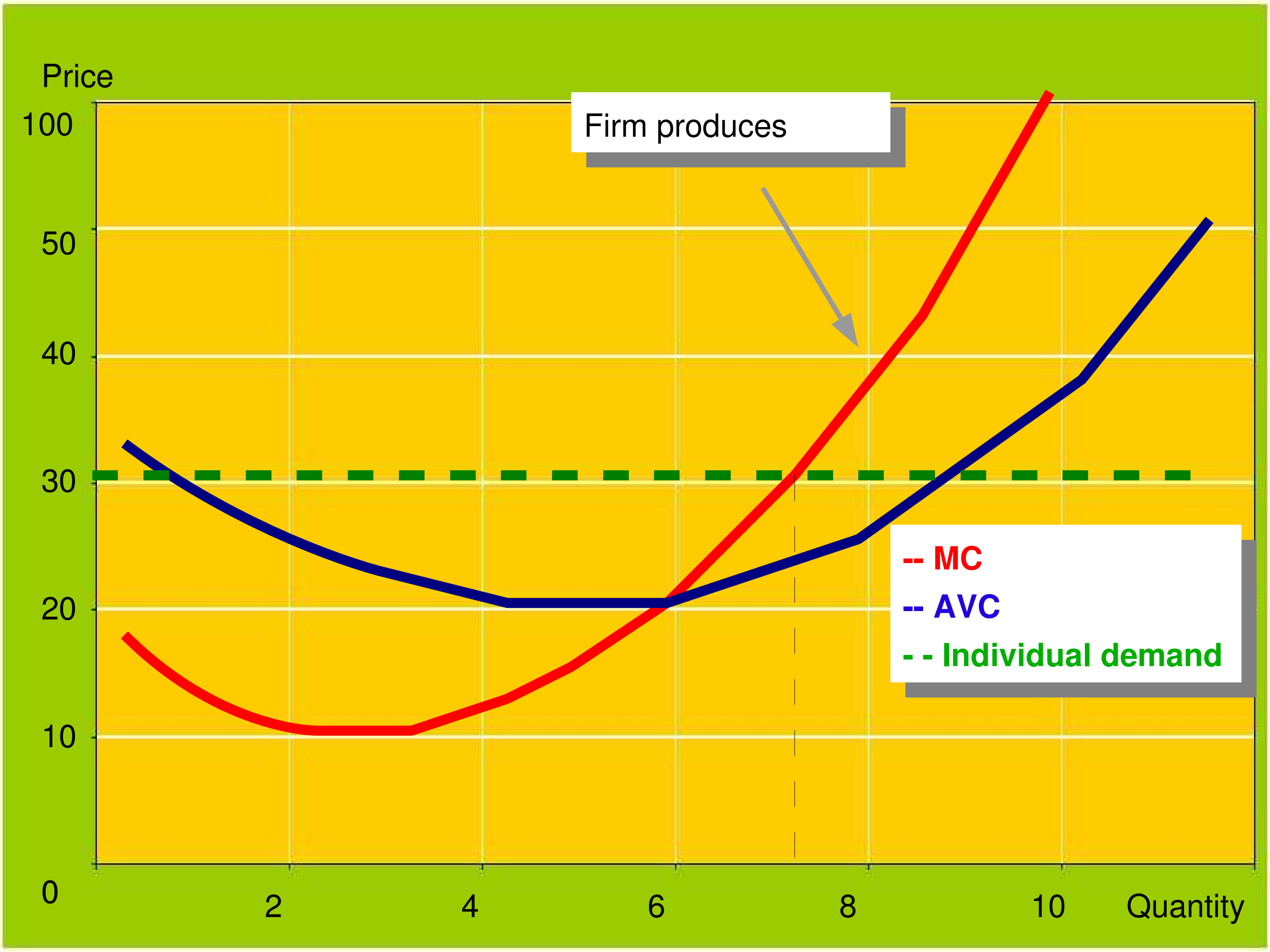
The Short-Run Equilibrium
The Market Equilibrium

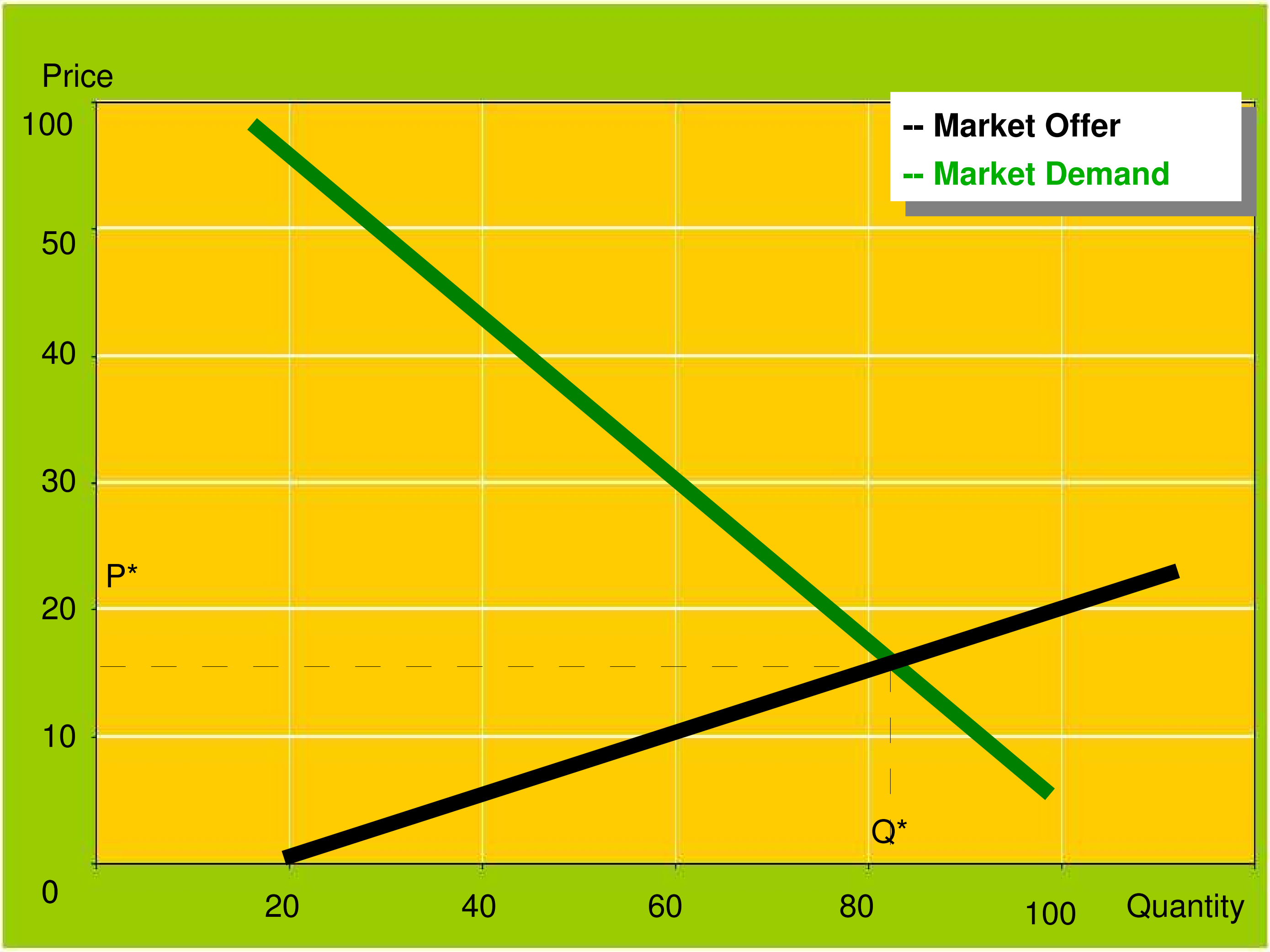
- In the short-run the number of firms is given and fixed. No firm can enter or leave.
- The market offer curve is the sum of the individual offer curves for every price.
- For each price, aggregate the quantities produced by every individual firm.
- The short-run equilibrium is the price such that the market demand equals the short-run market offer.

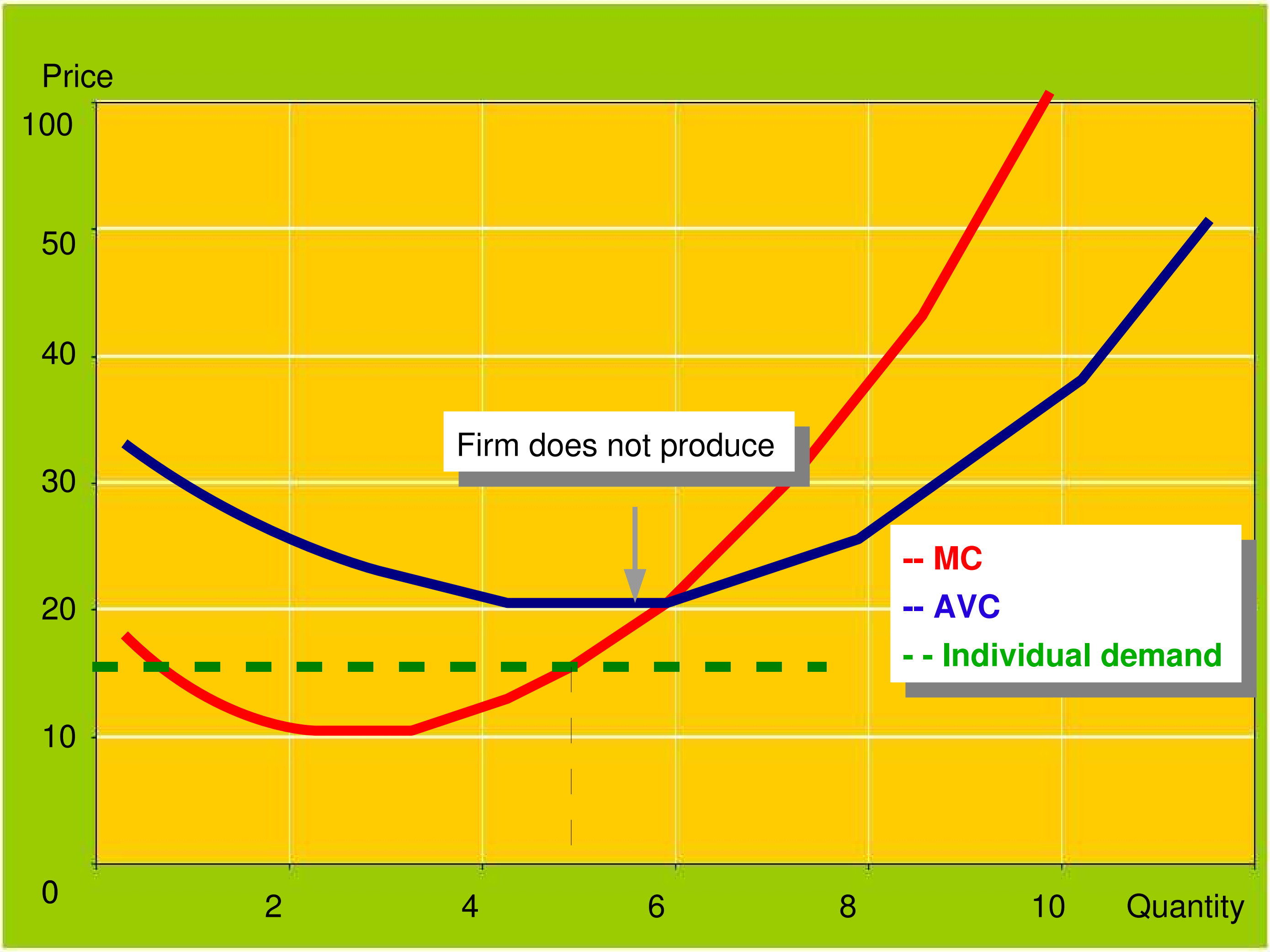
The Short-Run Equilibrium
The Market Equilibrium

- The market price in equilibrium P^* determines the quantities produced by each firm and its profits.
- If P^* is above AVC, but below AC will produce but with losses
- If it is above the AC, will produce with positive profits.
- If market price is below the minimum of AVC, then that firm will produce zero.


Price
100
50
40
P*
30
20
10
0
Q*
20
40
60
80
100
Quantity
-- Market Offer
-- Market Demand


Price
100
50
40
30
20
10
0
Firm produces
2
4
6
8
10
Quantity
-- MC
-- AVC
- - Individual demand


Price
100
50
40
30
P*
20
10
0
20
40
60
80
100
Quantity
Q*
-- Market Offer
-- Market Demand


Price
100
50
40
30
20
10
0
2
4
6
8
10
Quantity
Firm does not produce
-- MC
-- AVC
- - Individual demand

The Long-Run Equilibrium

- In the long-run a firm will not make loss or abnormal profits
  - If a firm makes losses in the long-run, it will shut down.
  - If a firm makes abnormal profits at current price, other firms will enter the market, offer increases, price reduces and approaches the minimum of long-run average costs.
- The above argument requires the assumption that firms are ex-ante identical from the technological point of view. No firm can take advantage.

The Long-Run Equilibrium

The Possible Equilibria

Unit 10

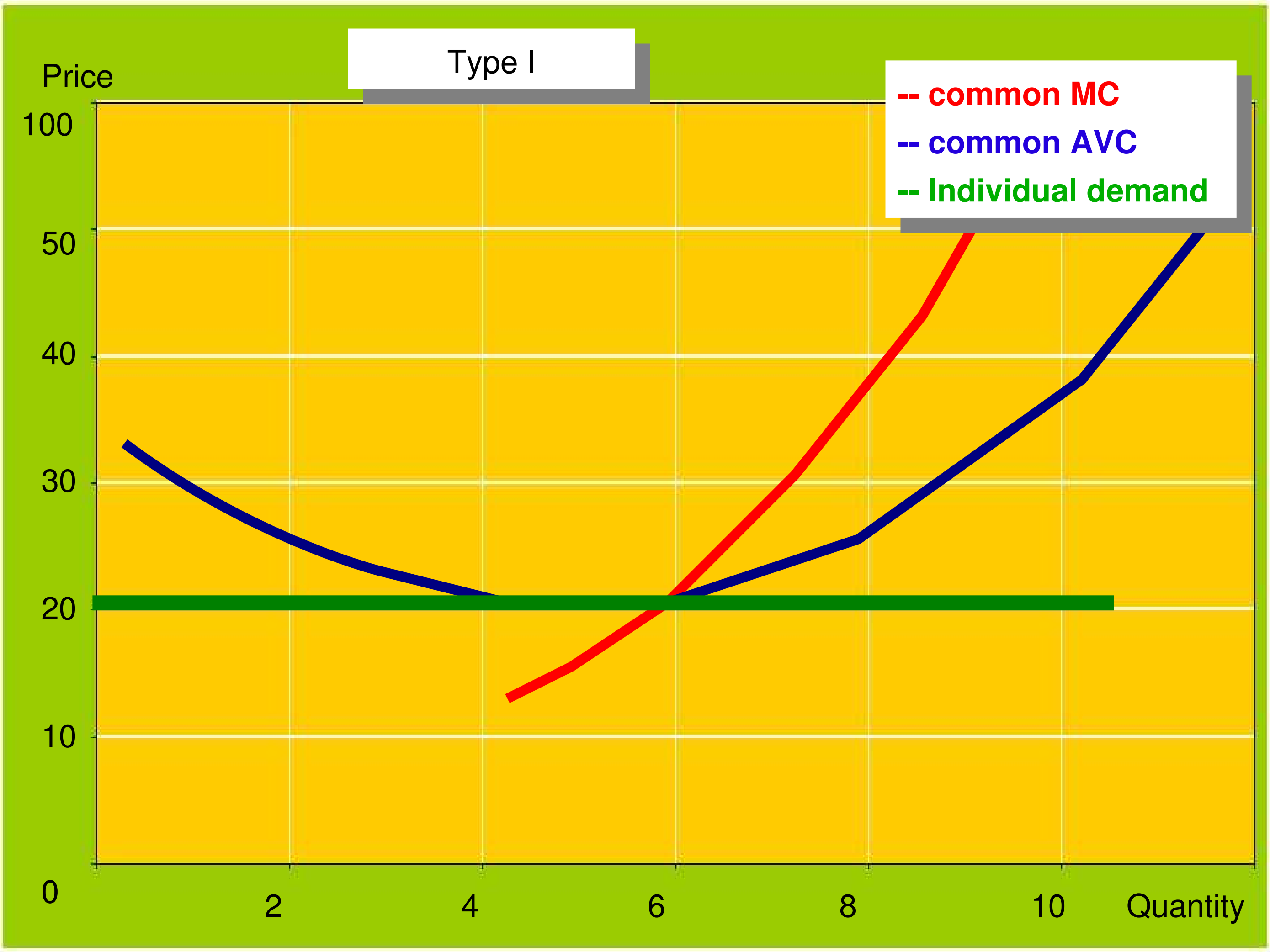
Economics - 6th year

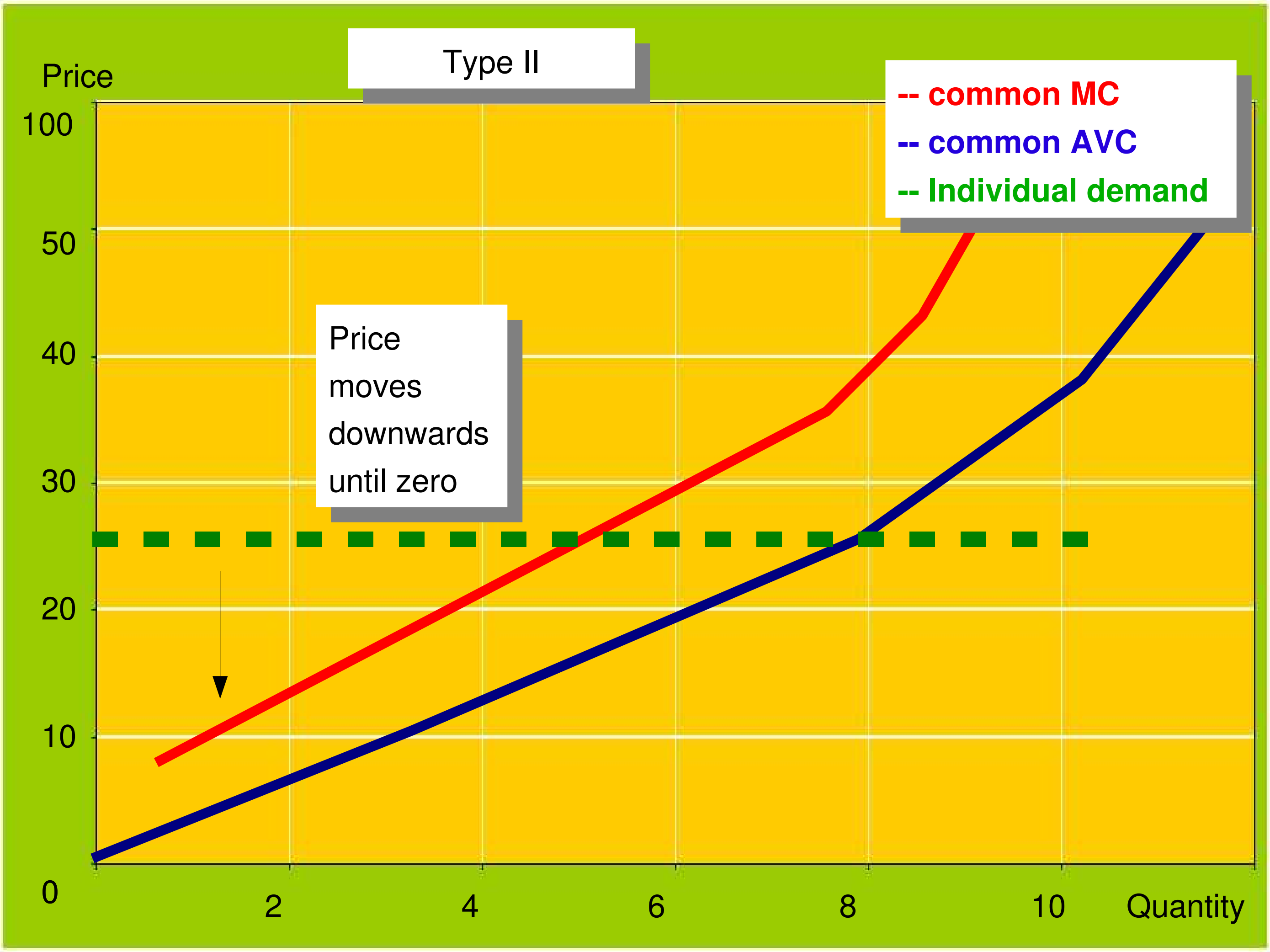
Assumptions on Perfect Competition

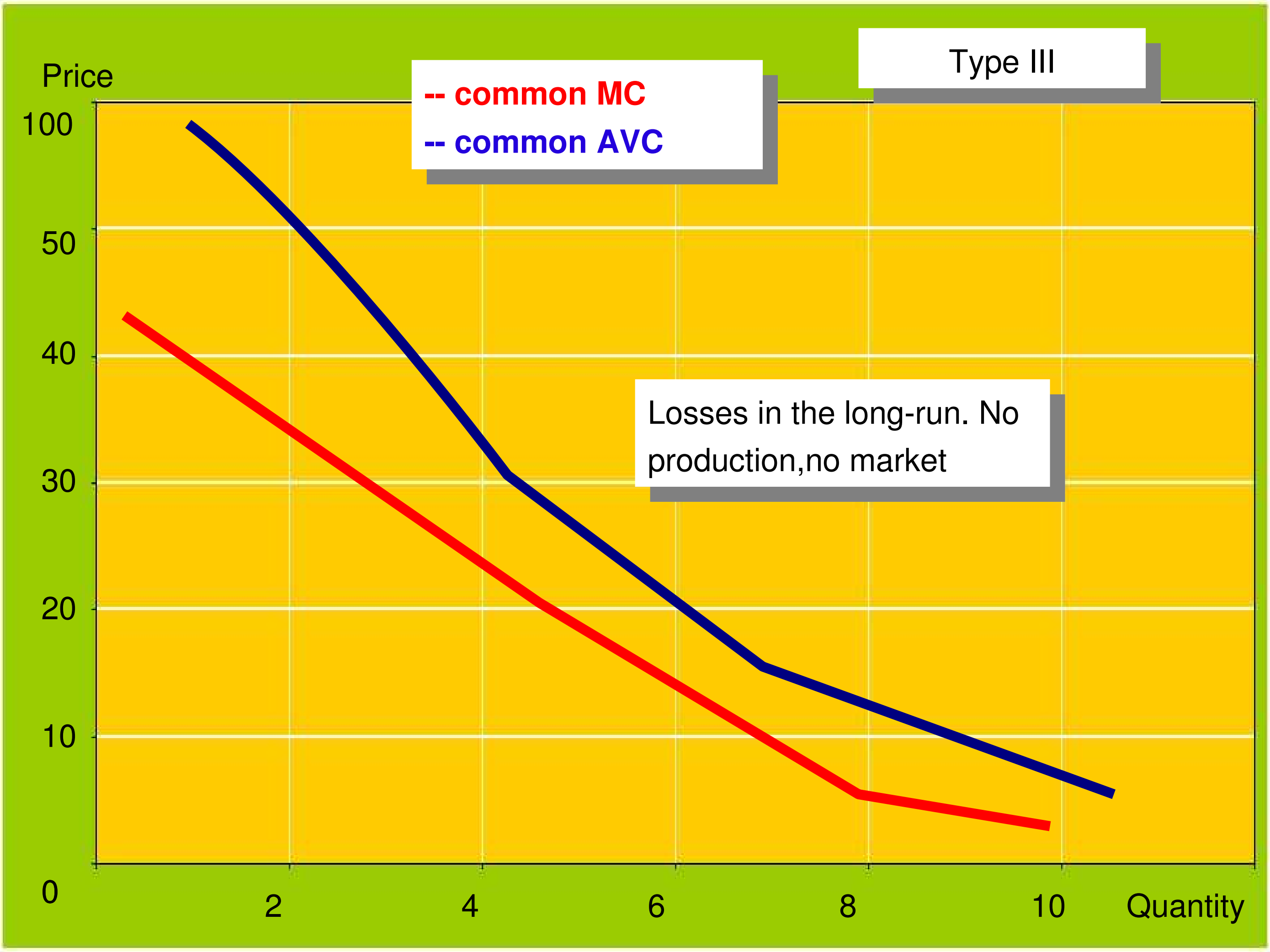
The Short-Run Equilibrium

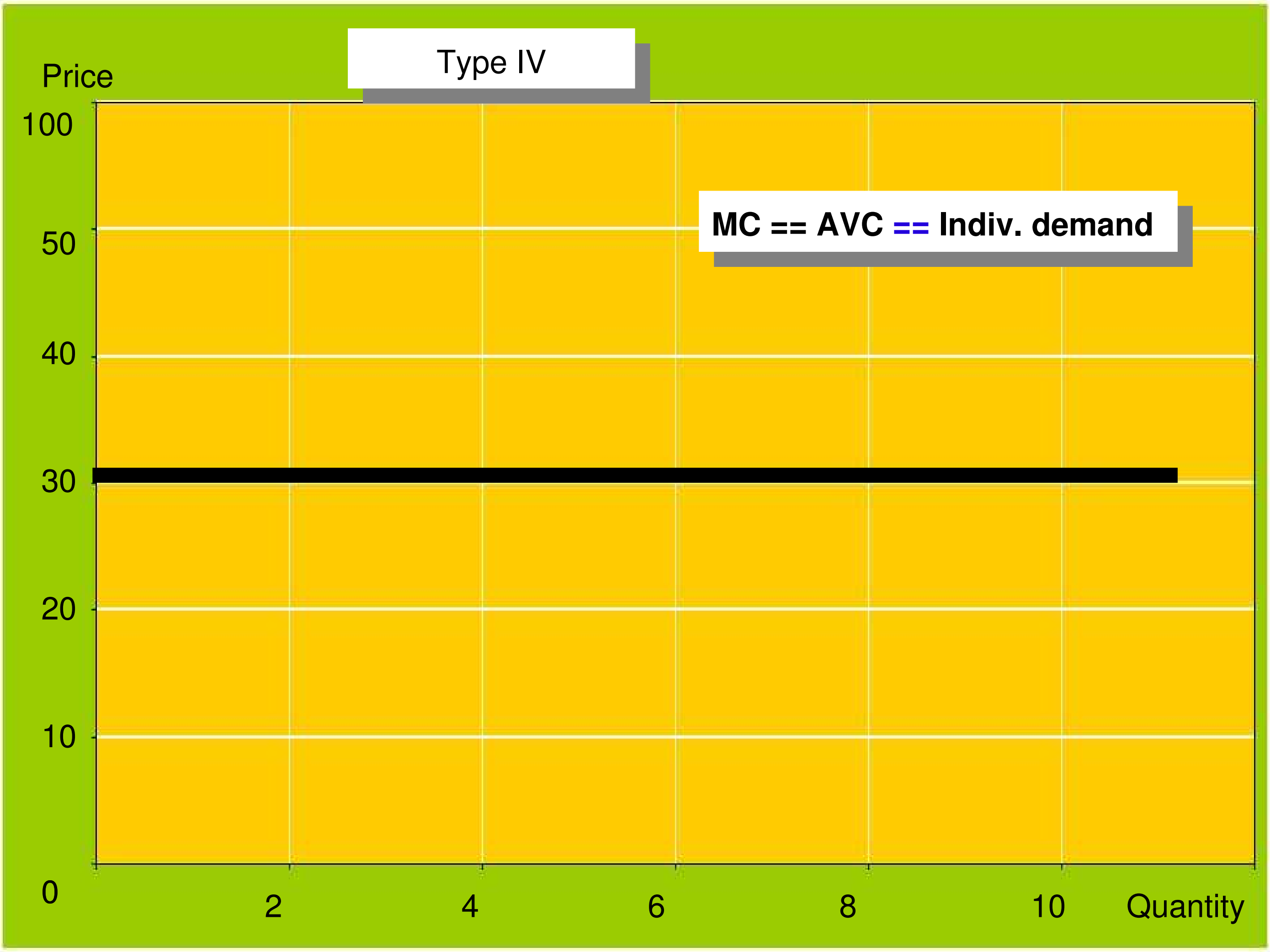
The Long-Run Equilibrium

- Type 1: All firms have identical U-shape AC cost functions. Firms enter the market until equilibrium price is at the minimum of the long-run AC.
- Type 2: All firms have identical increasing AC cost functions. Firms keep entering in the market. In the limit, each produces negligible amount.
- Type 3: All firms have identical decreasing AC cost functions. Since AC is always greater than price, all firms close in the long run. Market dissapears.
- Type 4: AC=MC and constant. In the long-run, price decreases until being equal to AC/MC. Equilibrium is not defined. One only firm can serve all market, or many serving small quantities.


Type I
Price
100
50
40
30
20
10
0
2
4
6
8
10
Quantity
-- common MC
-- common AVC
-- Individual demand


Type II
Price
100
50
40
30
20
10
0
2
4
6
8
10
Quantity
-- common MC
-- common AVC
-- Individual demand
Price moves downwards until zero


Type III
Price
-- common MC
-- common AVC
Losses in the long-run. No production,no market
100
50
40
30
20
10
0
2
4
6
8
10
Quantity


Type IV
Price
MC == AVC == Indiv. demand
100
50
40
30
20
10
0
2
4
6
8
10
Quantity