The Meaning of Competition

A perfectly competitive market has the following characteristics:

- **There are many buyers and sellers in the market.**
- **The goods offered by the various sellers are largely the same.**
- **Firms can freely enter or exit the market.**

As a result of its characteristics, the perfectly competitive market has the following outcomes:

The actions of any single buyer or seller in the market have a negligible impact on the market price. Buyers and sellers must accept the price determined by the market.

Buyers and sellers in competitive markets are said to be price takers.

Revenue of a Competitive Firm

Total revenue for a firm is the *selling price* times the *quantity sold*.

$$TR = (P \times Q)$$

Revenue of a Competitive Firm

Average revenue equals the price of the good.

$$\textit{Average revenue} = \frac{\textit{Total revenue}}{\textit{Quantity}}$$

$$= \frac{(\textit{Price} \times \textit{Quantity})}{\textit{Quantity}}$$

$$= \textit{Price}$$

Revenue of a Competitive Firm

Marginal revenue is the change in total revenue from an additional unit sold.

$$MR = \Delta TR / \Delta Q$$

For competitive firms, marginal revenue equals the price of the good.

Total, Average, and Marginal Revenue for a Competitive Firm

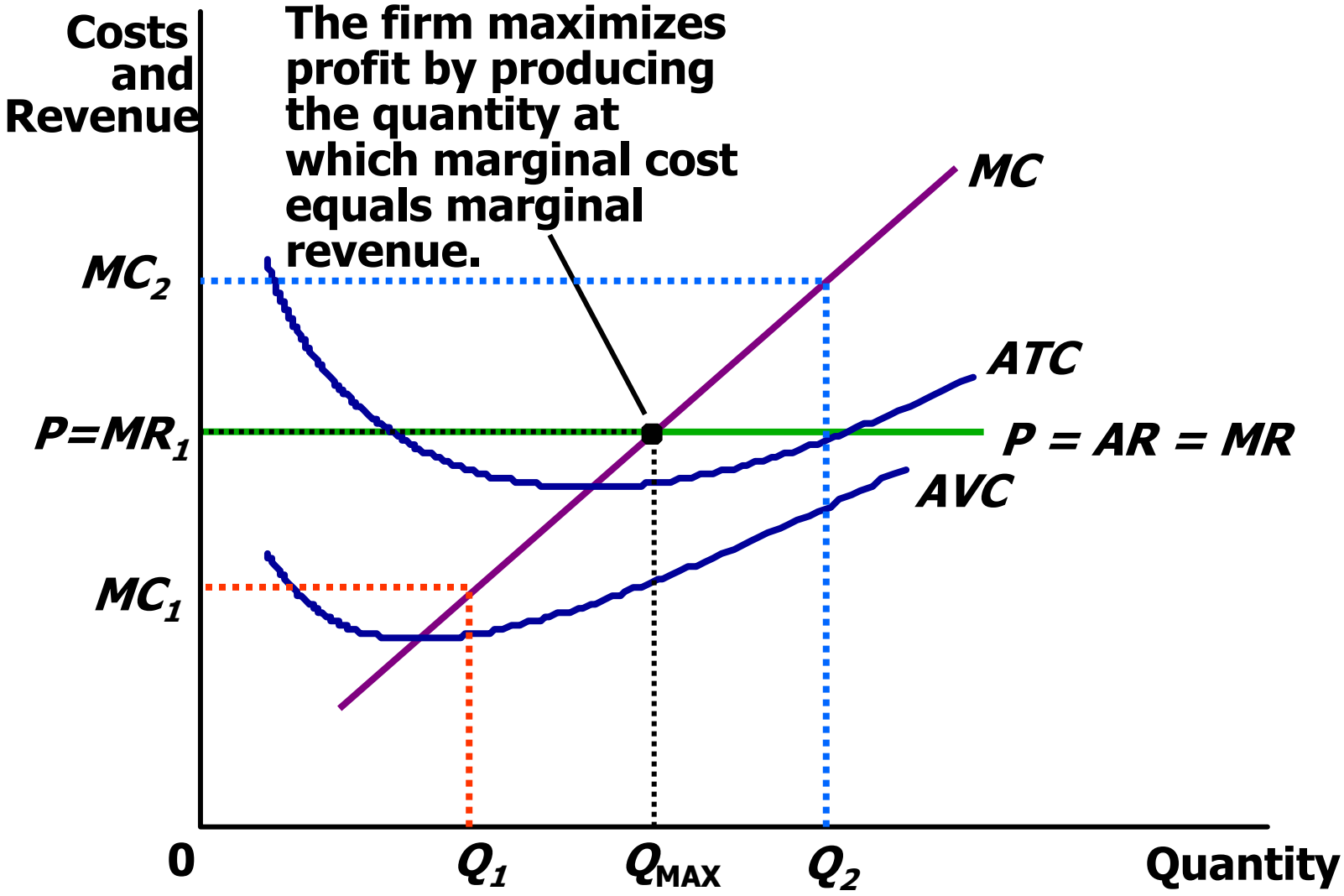
Quantity (Q)	Price (P)	Total Revenue (TR=PxQ)	Average Revenue (AR=TR/Q)	Marginal Revenue (MR=$\Delta TR/\Delta Q$)
1	$6.00	$6.00	$6.00	
2	$6.00	$12.00	$6.00	$6.00
3	$6.00	$18.00	$6.00	$6.00
4	$6.00	$24.00	$6.00	$6.00
5	$6.00	$30.00	$6.00	$6.00
6	$6.00	$36.00	$6.00	$6.00
7	$6.00	$42.00	$6.00	$6.00
8	$6.00	$48.00	$6.00	$6.00

Profit Maximization for the Competitive Firm

- The goal of a competitive firm is to maximize profit.

- This means that the firm will want to produce the quantity that maximizes the *difference between total revenue and total cost*.

Profit Maximization for the Competitive Firm…



Profit Maximization for the Competitive Firm

Profit maximization occurs at the quantity where marginal revenue equals marginal cost.

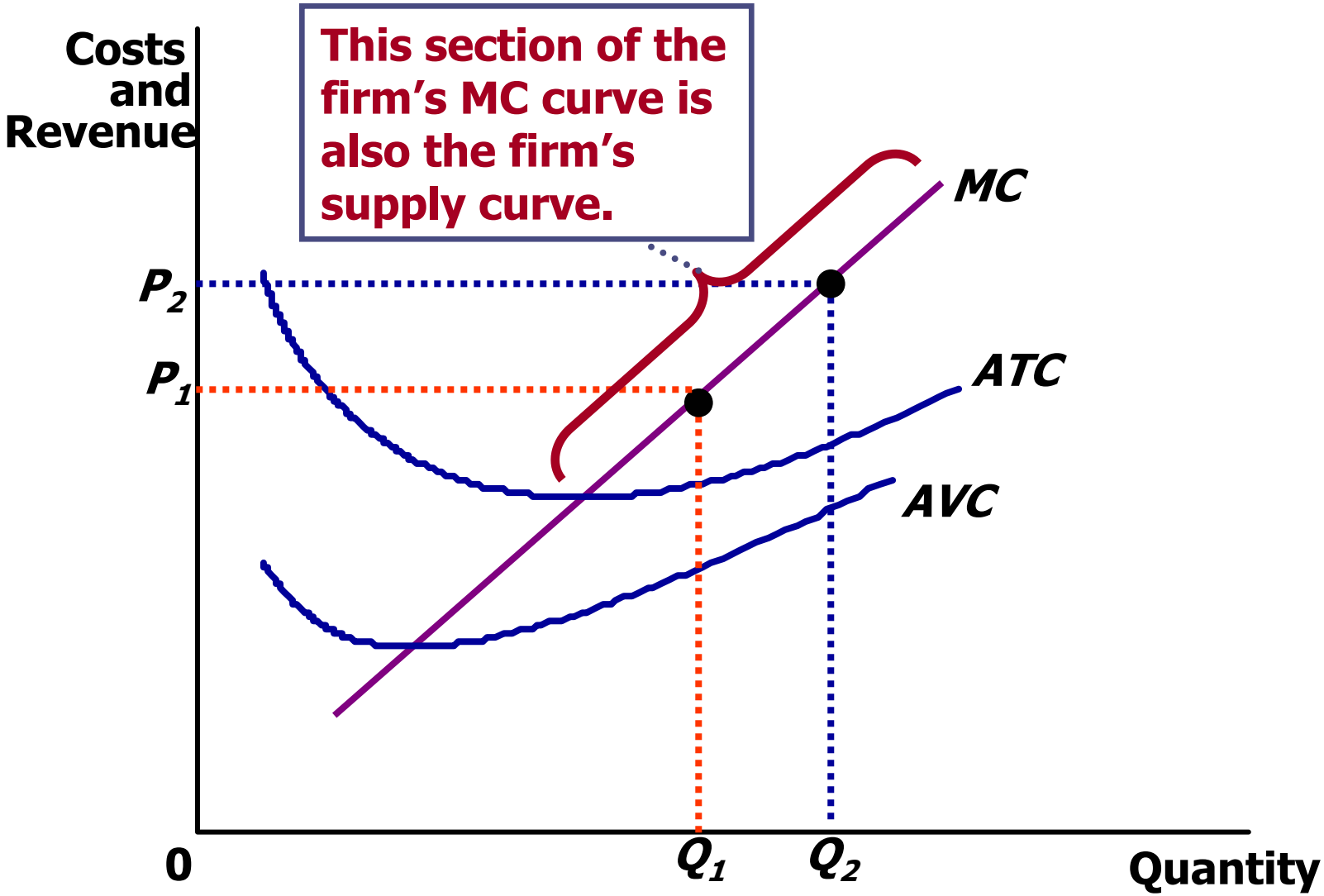
When MR > MC* increase *Q

When MR < MC* decrease *Q

When MR = MC

Profit is maximized.

The Marginal-Cost Curve and the Firm's Supply Decision...



The Firm's Short-Run Decision to Shut Down

- A shutdown refers to a short-run decision not to produce anything during a specific period of time because of current market conditions.
- Exit refers to a long-run decision to leave the market.
- Sunk costs are costs that have already been committed and cannot be recovered….important when deciding to exit (a long run consideration)…unimportant when deciding whether to shut down (a short run consideration)

The Firm's Short-Run Decision to Shut Down

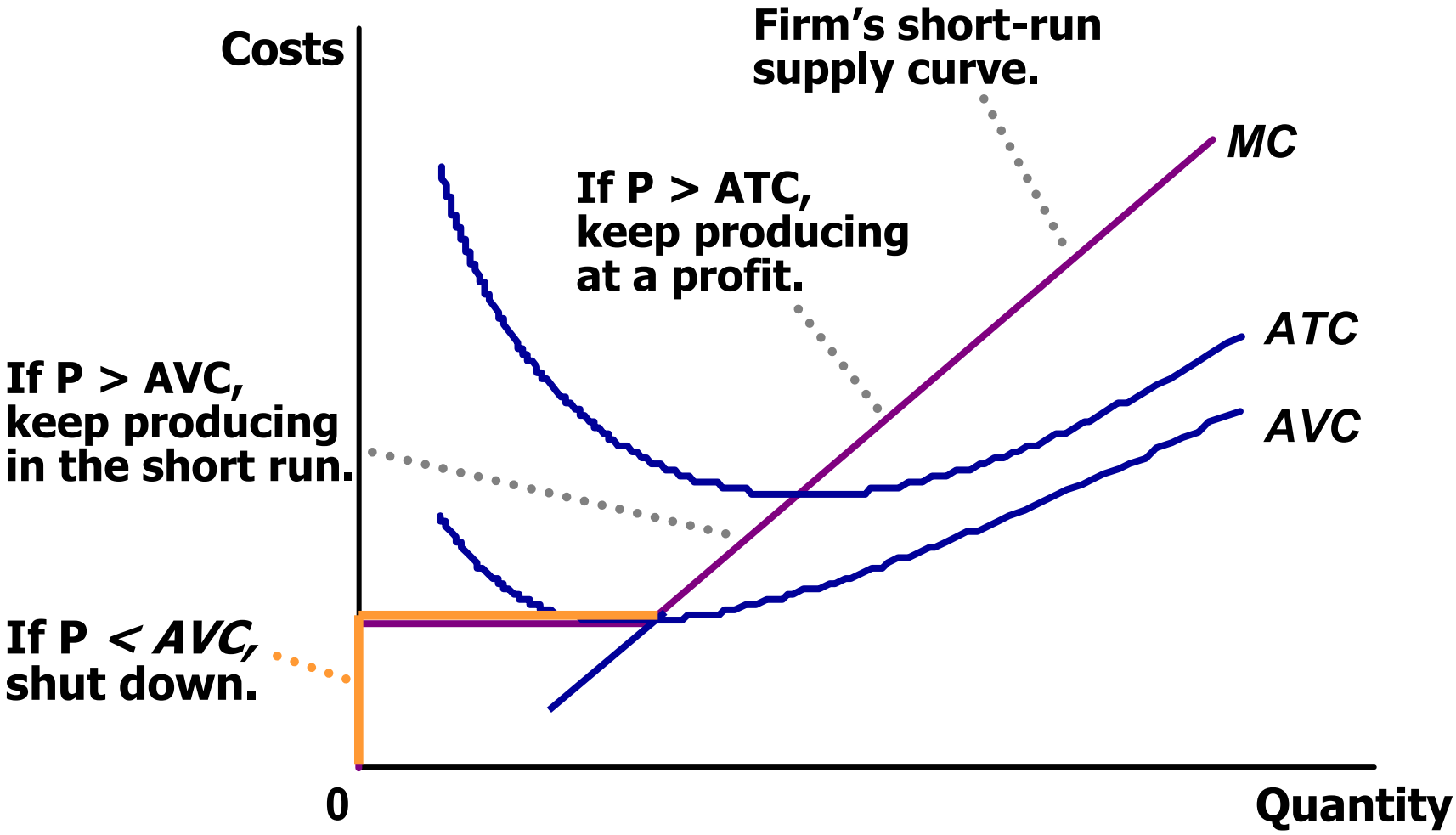
The firm shuts down if the revenue it gets from producing is less than the variable cost of production.

Shut down if TR < VC

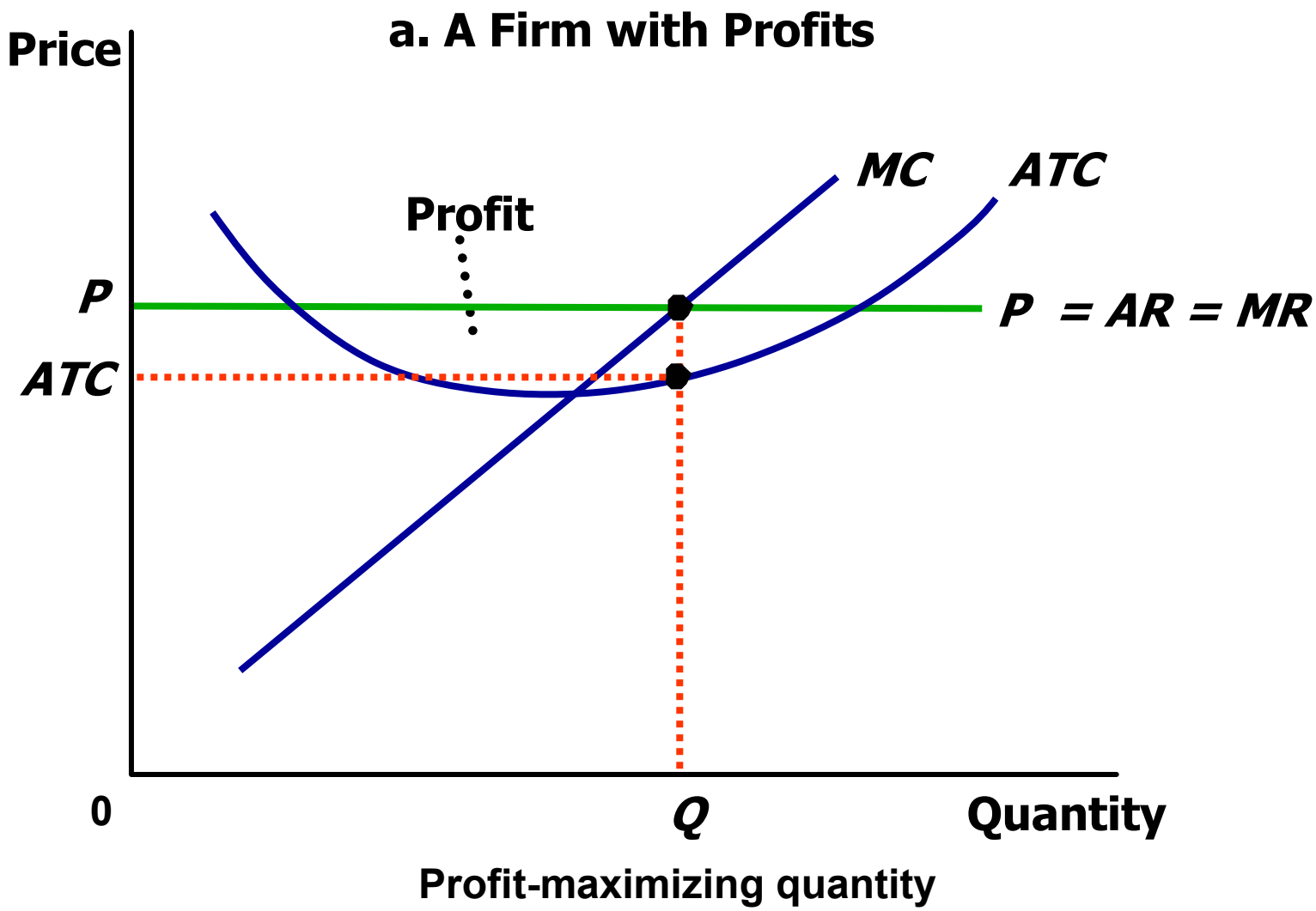
Shut down if TR/Q < VC/Q

Shut down if P < AVC

The Firm's Short-Run Decision to Shut Down...



Measuring Profit in the Graph for the Competitive Firm...



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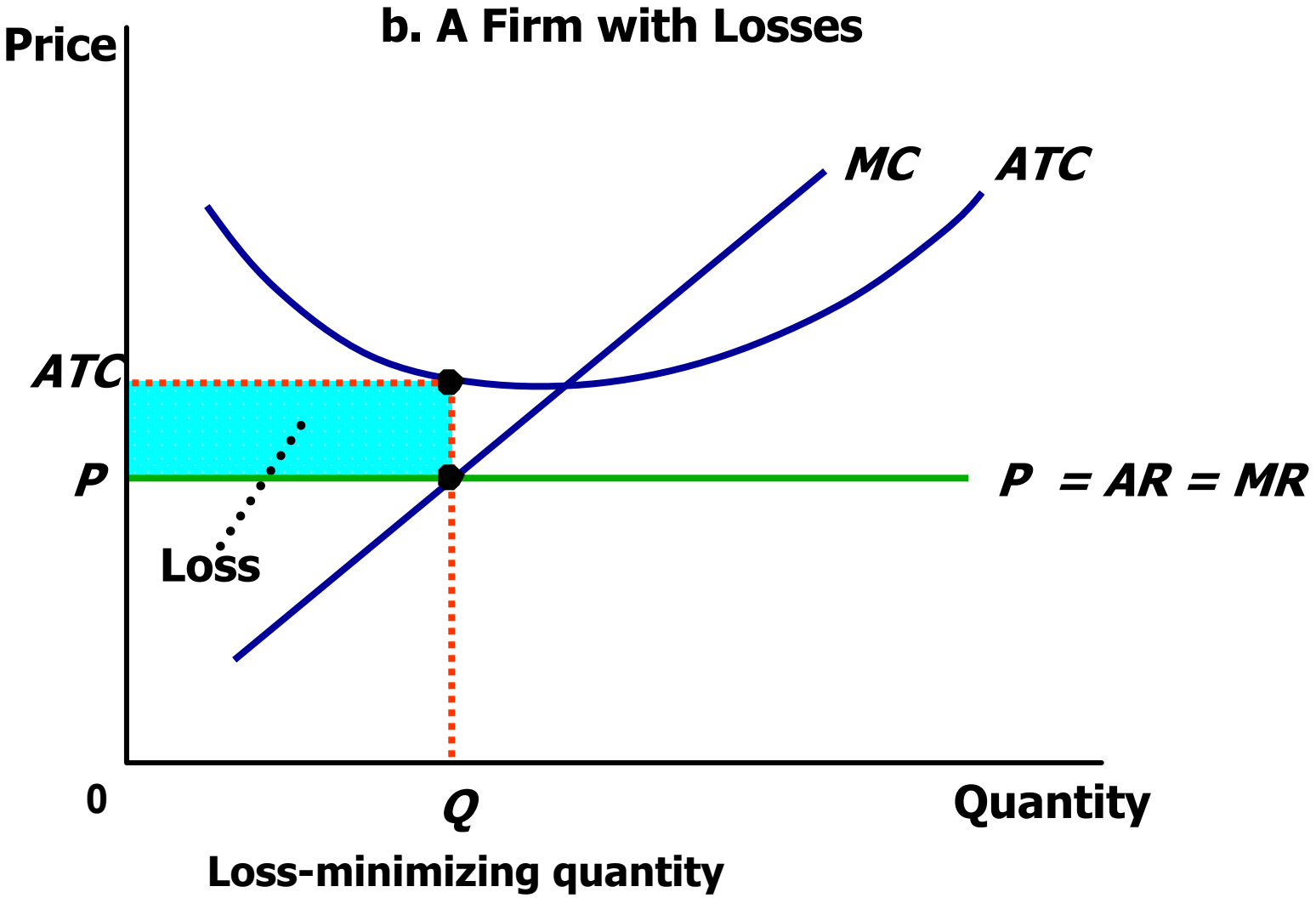

The Long Run: Entry and Exit

At the end of the process of entry and exit, firms that remain must be making zero economic profit.

In the zero-profit equilibrium, the firm's revenue compensates the owners for the time, effort and money they spend to maintain the business….but nothing extraordinary beyond that level

The process of entry & exit ends only when price and average total cost are driven to equality.

Long-run equilibrium requires perfectly competitive firms operating at their efficient scale.