

Long-Run Equilibrium

AP Microeconomics | Unit 3 | perfect competition: entry, exit, zero profit, efficiency

1. Perfect competition and the price taker

Perfect competition: many small firms and many buyers; identical products; no barriers to entry or exit.

Price taker

Each firm is too small to affect the market price, so it takes the price as given. Its demand curve is a horizontal line at the market price, and

$$P = MR = \text{the firm's demand curve.}$$

2. Profit attracts entry

Draw two graphs side by side: the **market** (supply and demand set the price) and **one firm** (MC and ATC; the price is a horizontal line carried across from the market).

Market price \$100, above the firm's ATC	firms earn an economic profit
Profit attracts new firms	market supply shifts <i>right</i>
The market price falls	the firm's price line drops; its profit shrinks
Entry stops when $P = \text{minimum ATC}$ (\$70)	economic profit is zero

Entry shifts the *market* supply curve. The firm's cost curves do not move; only its price line does.

3. Long-run equilibrium

If the price is *below* minimum ATC, the reverse happens: losses $\Rightarrow$ some firms exit $\Rightarrow$ market supply shifts left $\Rightarrow$ the price rises back to minimum ATC.

Long-run equilibrium in perfect competition

$$P = MR = MC = \text{minimum ATC}$$

Economic profit is **zero** (a normal profit). No firm wants to enter and no firm wants to leave.

4. Why it is efficient

Allocative efficiency	$P = MC$	the right amount is produced
Productive efficiency	$P = \text{minimum ATC}$	produced at the lowest cost per unit

Perfect competition achieves both in the long run. Every other market structure is measured against these two conditions.

Where students lose points

1. Shifting the firm's curves when firms enter: the market supply shifts.
2. Price lines that do not match across the two graphs.
3. Saying zero economic profit means firms leave.
4. A long-run price that is not at the minimum of ATC.
5. Mixing up the two efficiencies: $P = MC$ is allocative, $P = \text{minimum ATC}$ is productive.

Now practise it

Theory sticks once you use it. On **sad-academy.com** you'll find practice questions for this exact subtopic in the AP format, and an AI that grades your free-response answers against the scoring guidelines, the way an AP reader would.

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