

AP Microeconomics supplies no formula sheet, and it does not need a long one – the calculations are short. What must be recalled precisely is the set of graphs, because free-response questions instruct you to draw a “correctly labelled” graph and score the labels themselves, and the decision rules that tell a firm what to do.
无公式表; 评分点集中在 “标注正确的图形” 与厂商决策规则。

The calculations

Elasticities 弹性 — Each is a percentage change divided by a percentage change: quantity over price for PED, quantity over income for YED, quantity of A over price of B for XED. Sign matters for YED and XED; size matters for PED.

Total, average and marginal 总量、平均与边际 — Marginal is the change in the total from one more unit. When marginal is above average, average rises; when below, average falls. This relationship is examined as a concept, not just arithmetic.

Profit 利润 — Profit = $(P - ATC) \times Q$. Accounting profit subtracts explicit costs only; ECONOMIC profit also subtracts implicit costs, so zero economic profit still means the firm is doing as well as its next-best alternative.

Per-dollar rules 单位货币最优 — Utility maximisation: $\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$. Least-cost hiring: $\frac{MP_L}{P_L} = \frac{MP_K}{P_K}$. Profit-maximising hiring: hire until marginal revenue product equals the wage.

The decision rules

How much to produce — Produce where marginal revenue equals marginal cost, for every market structure without exception. Then read the price off the DEMAND curve, not off the marginal revenue curve – that misreading is the single most penalised error in monopoly questions.

Whether to produce at all — In the short run, shut down if price is below average VARIABLE cost; fixed costs are sunk and irrelevant. In the long run, exit if price is below average TOTAL cost.

What happens next — Supernormal profit in perfect competition attracts entry, which shifts the market supply right, lowers price, and returns each firm to normal profit. Losses cause the reverse. The exam asks for this sequence in words.

Efficiency conditions — Allocative efficiency is $P = MC$; productive efficiency is producing at minimum average total cost. Perfect competition achieves both in long-run equilibrium; monopoly achieves neither, and the deadweight loss triangle shows why.

Graphs that must be drawn correctly labelled

The perfectly competitive firm side by side with its market, with the firm’s demand as a horizontal line at the market price – and the two graphs must share the same price level.

Monopoly with the marginal revenue curve below and twice as steep as demand, the profit-maximising quantity, the price read up to demand, and the deadweight loss triangle.

Monopolistic competition in the long run, tangency of demand to average total cost, with excess capacity marked.

The labour market: market wage determination beside the individual firm’s horizontal supply of labour, and the monopsony case with marginal factor cost above supply.

Externalities: marginal social cost above marginal private cost for a negative externality, the socially optimal quantity, and the welfare loss.

Per-unit tax or subsidy with the incidence split shown, and the deadweight loss.

The production possibilities curve, and a game-theory payoff matrix with the dominant strategy and Nash equilibrium identified.

How the free-response is scored

“Correctly labelled” is literal: both axes named, every curve named, the equilibrium marked with dotted lines, and any quantity or price the question asks about labelled on the axis. Points are awarded per label.

When a question says “explain”, give the causal chain: this changes, which causes that, which causes the outcome. A single sentence naming the outcome earns the answer point but not the explanation point.

Answer in the order asked and use the question’s own part labels. Graders look for part (b)(ii) where it belongs, and an answer given in the wrong place can go unscored.