Microeconomics, Module 7, “Competitive Firms in the Short-run”

Microeconomics module 7: Readings from tenth edition

(The attached PDF file has better formatting.)

Modules 1-7 cover the tools of microeconomic analysis, following Landsburg’s textbook; the entire chapter is required for the online VEE course. Modules 8-24 select topics from the textbook. Mathematical modules are #7 (competitive firm in the short run), #8 (competitive firm in the long run), #9 (welfare economics, consumers’ surplus, and producers’ surplus), #11 (monopoly), and #12 (price discrimination). Other modules focus more on economic reasoning, not formulas.

Module 7 covers the first third of Chapter 7: competitive firms in the short-run. Read Section 7.1; know the definition of the competitive firm right above section 7.1.1. The mathematical corollary is after exhibit 7-1: “The competitive firm’s marginal revenue curve is flat at the level of the going market price.” Know the two equations preceding this line:

“total revenue = price × quantity” and “marginal revenue = price”

The final exam questions use *linear demand curves*, which create *linear marginal revenue curves*. Most *supply* curves on the final exam are linear or flat. Sometimes the final exam asks you to construct the supply curve, which may not be linear. If the final exam gives you a schedule for marginal cost or marginal revenue, the problem is solved directly from the schedule of figures given in the problem. The curves inferred from these figures may not be linear, but there is no need to construct curves.

For a competitive firm’s supply curve, know the line after exhibit 7-4: “for a competitive firm with an upward sloping marginal cost curve, the supply curve and the marginal cost curve look exactly the same.”

Know the relations in the section on the Shutdown Decision: TR $\geq$ VC and P $\geq$ AVC; if these do not hold, the firm shuts down in the short run. If fixed costs are more than zero, the inequalities are strict.

Know the formula for the price elasticity of supply in section 7.1.4. This is the same as the formula for the price elasticity of demand, except that we use the derivative of the supply curve, not the derivative of the demand curve. The final exam tests both the price elasticity of demand and the price elasticity of supply.

Section 7.2, “the competitive industry in the short run,” is the basis of many final exam problems. We show the procedure in the practice problems; the final exam problems are the same. You are given the demand curve, the industry supply curve, and the firm’s marginal cost curve, from which you derive the market price and quantity, the firm’s quantity, and the number of firms in the industry (if they are the same size).

Section 7.3 is in Module 8, not Module 7.

Review question R1. Distinguish between relations that are true for all firms and those that are true for perfectly competitive firms.

Review questions R3, R4, R5, R6, R7, R8, R9, R10. The concepts of economic profit vs accounting profit are on three VEE courses: microeconomics, macroeconomics, and corporate finance.

The mathematical exercises assume long-run equilibrium; you review them in the next module.

Review end of chapter problem 1. The other problems consider both short run and long-run effects; you review them in the next module.