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

Microeconomics module 7: Readings from eighth edition

(The attached PDF file has better formatting.)

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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 chapters. The 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). The other modules focus more on economic reasoning, not formulas.

Module 7 covers the first third of Chapter 7: competitive firms in the short-run. Know the definition of the competitive firm at the bottom right corner of page 171. The mathematical corollary is near the top of page 173: “The competitive firm’s marginal revenue curve is flat at the going market price.” Know the two equations on page 173 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 on page 176: “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 on page 178: 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 on the bottom of page 180. 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.

Section 7.2, “the competitive industry in the short run,” is the basis of most final exam problems on this module. We show the procedure in the practice problems; the homework and 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 on page 212. Distinguish between relations that are true for all firms and those that are true for perfectly competitive firms.

Review questions R7, R8, R9, and R10 on page 213. The concepts of economic profit vs accounting profit are on three VEE courses: microeconomics, macroeconomics, and corporate finance.

The mathematical exercises beginning on page 213 assume long-run equilibrium; you review them in the next module.

Review problem 1 on pages 217-218. The other mathematical problems consider both short run and long-run effects; you review them in the next module.