Econ_101_Spring 2007_IVY Tech College
Chapter_04_Solutions to Sample Questions

2. Consider a firm with the following short-run costs:

Quantity	Variable Cost	Total Cost
1	30	90
2	50	110
3	90	150
4	140	200
5	200	260

a. What is the firm's fixed cost?

The firm's fixed cost is $60.

b. Compute short-run marginal cost, short-run average variable cost, and short-run average total cost for the different quantities of output.

Quantity	**MC**	**AVC**	**ATC**
1	**30**	**30**	**90**
2	**20**	**25**	**55**
3	**40**	**30**	**50**
4	**50**	**35**	**50**
5	**60**	**40**	**52**

c. Draw the three cost curves. Explain the relationship between the SMC curve and the SATC curve and the relationship between the SAVC curve and the SATC curve.

The SMC curve initially decreases and then increases. Thus both average cost curves initially decrease until they meet marginal cost, and then increase.

5. Consider a firm that has constant marginal returns. That means that the first worker is just as productive as the second, who is just as productive as the third, and so on. The same is true for all the firm's inputs.

a. Draw the firm's short-run marginal cost curve.

The SMC curve will be horizontal.

b. Explain why this firm's cost curve differs from the short-run marginal cost curve for rake production.

This firm has no gains from specialization and no diminishing returns. (Rake production refers to the example in the text.)

7. You want to know the marginal cost of producing a Chevrolet Caprice. Critically appraise the following quote from an analyst in the production department. "The marginal cost of a Caprice, given our current volume, is $12,500. Of course, the actual marginal cost depends on the number of cars produced: the larger the number produced, the lower the unit cost because we will spread out our design and tooling costs over more cars."

This is wrong. This person is speaking about the average cost, not the marginal cost. The latter refers only to the *change* in cost, and thus has nothing to do with those fixed costs.