

## MERGER ANTITRUST LAW

LAWJ/G-1469-05  
Georgetown University Law Center  
Fall 2019

Tuesdays and Thursdays, 3:30-5:30 pm  
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### CLASS 11 WRITTEN ASSIGNMENT

#### Instructions

Submit by email by 3:30 pm on Tuesday, October 8  
Send to [dale.collins@shearman.com](mailto:dale.collins@shearman.com)  
Subject line: Merger Antitrust Law: Assignment for Class 11

#### Assignment

Calls for short answers. Since the assignment calls for some equations, feel free to write your answers using a pencil and paper (rather than a computer) if that is easier. Attach either a scan or a photograph to your email.

Assumptions: Consider a single firm.

1. The market price is  $p$  (whatever that may be)
2. The firm's residual demand function is  $q = 100 - 8p$
3. The firm has fixed costs  $F = 25$  and constant marginal costs  $c = 5$

Questions:

1. Explain the concept of a demand curve. Why is it downward sloping?
2. What is the equation for the firm's inverse demand curve? If  $q = 20$ , what is the market clearing price?
3. What is the equation for the firm's revenues? What are the firm's revenues when  $q = 20$ ?
4. Explain the concept of marginal revenue and how it relates to gross revenue gains and losses associated with incremental sales. What is the equation for the firm's marginal revenue at a production level  $q$ ? What is the firm's marginal revenue when  $q = 20$ ?
5. Explain the concepts of total cost, fixed cost, total variable cost, average variable cost, marginal cost, and constant marginal cost. What are the equations for these variables? What are these various costs when  $q = 20$ ?
6. Explain why the firm maximizes profit when marginal revenue equals marginal cost.
7. What is the firm's price, output, revenues, total costs, and profits at the profit-maximizing level of output given the above assumptions?

8. Say the firm's fixed costs  $F$  decrease to 20. What is the firm's price, output, revenues, total costs, and profits at the profit-maximizing level of output?
9. Say the firm's fixed costs  $F$  remain at 25 but its (constant) marginal cost  $c$  decreases to 4. What is the firm's price, output, revenues, total costs, and profits at the profit-maximizing level of output?
10. Explain what the firm should do and why if it finds that marginal revenue is greater than its marginal cost at current production (say because of a shift in demand).

If you have any questions, send me an e-mail. See you in class.