1. To answer the next 7 questions, suppose that a monopolistically competitive firm in the shampoo industry is faced with the following demand and cost curves. Assume there are no externalities in the production or purchase of shoes, and notice that quantity is measured in 1000s.

Assuming this firm maximizes profits,
2. what price will the firm charge?
3. what output will the firm produce?
4. what will the dollar value of its profits be?

At the profit maximizing output and price,
5. what is the dollar value of the deadweight loss to society?
6. what is the benefit to society of the last bottle of shampoo?

7. In the long run, we should expect that:
a. there will be more firms in the shampoo industry and this firm will receive a lower price for shampoo.
b. there will be more firms in the shampoo industry and this firm will receive a higher price for shampoo.
c. there will be fewer firms in the shampoo industry and this firm will receive a higher price for shampoo.
d. none of the above.
To answer the next 5 questions, consider the diagrams below representing the market for steel and the typical firm’s cost curves.

BE SURE TO NOTE THAT QUANTITIES ARE MEASURED IN THOUSANDS IN THE DIAGRAMS ABOVE WHEN CALCULATING YOUR ANSWERS.

8. If the steel industry is at a competitive long run equilibrium, what is the current price of steel and how much is the industry as a whole producing?

9. Based on the diagram above, how many firms are in the steel industry?

10. If a cartel agreement is formed among steel producers and their objective is to maximize profits in the steel industry, what level of output should each firm in the industry produce?

11. With formation of the cartel, the deadweight loss to society (increases, decreases) by $__________.

12. Compared to the competitive outcome, how much worse off are steel consumers as a result of the cartel?

To answer the next two questions, suppose that the following firms make up the entire athletic shoe industry and have the market shares indicated:

Nike (30%); Converse (20%); Adidas (10%); Reebok (20%); NewBalance (5%); Brooks (5%); Fila (5%); Buster Brown (5%).

13. What is the Herfindahl-Hirschmann Index for the athletic shoe industry?

14. What is the four-firm concentration ratio for the athletic shoe industry?
15. The first major piece of anti-trust legislation passed in the United States was the _______ Act.

16. If Microsoft requires that any computer manufacturer who purchases the Windows operating system also purchase the Microsoft Office software, they would be making what the Clayton Act refers to as a(n) ___________.

17. One way that a manufacturer could enforce a cartel agreement among its retailers would be to use what the Miller-Tydings act defines as ___________.

18. In the McTravel lawsuit, airlines successfully argued that
   a. resale price maintenance was necessary to make it possible for full-service travel agents to survive.
   b. price discrimination for business and leisure travelers was justified.
   c. mergers between travel agents would not be harmful to consumers.
   d. none of the above.

19. Other things being the same, the Department of Justice is less likely to approve a merger in an industry if:
   a. there is a high degree of concentration in the industry.
   b. it is relatively difficult for firms in the industry to monitor each other's output and/or prices.
   c. there are relatively few barriers to entry in the industry.
   d. all of the above.
   e. only a and b.

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To answer the next 3 questions, suppose that a firm sells the installation of lawn sheds in a perfectly competitive market at a price of $100 per installation (the customer must buy the materials). The number of shed installations per week depends on the number of workers employed according to the following table.

<table>
<thead>
<tr>
<th>No. of workers</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
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<tr>
<td>No. of sheds per week</td>
<td>6</td>
<td>11</td>
<td>15</td>
<td>18</td>
<td>20</td>
<td>21</td>
</tr>
</tbody>
</table>

20. Based on the information provided, what is marginal revenue product of the fourth worker?

21. Based on the information provided, if the wage rate is $250 per week, how many workers should the firm hire to maximize profits?

22. Based on the information provided, if the wage rate is $250 per week, this firm's profits would (increase, decrease) by $______ if the number of workers increased from 2 to 3.

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23. Labor demand for airline workers will be more elastic if:
   a. the demand for airline tickets is more elastic.
   b. labor is a smaller share of the airline's total costs.
   c. it is relatively difficult to replace airline workers with capital.
   d. all of the above.
   e. only a and b.
24. Other things being the same, unions would be more attractive to workers in industries where:
   a. product demand is inelastic.
   b. labor is a small share of the total costs of production.
   c. it is difficult to substitute capital for labor.
   d. all of the above.
   e. only a and b.

25. An increase in the minimum wage will create more job loss if labor demand is
   a. elastic.
   b. inelastic.

26. Since 1980, the wage difference between college and high school graduates has
   a. increased
   b. decreased.

27. According to economic research, the explanation for the growing wage difference between college and high school graduates is:
   a. the result of changes in the labor supply of college and high school graduates.
   b. the result of changes in the labor demand for college and high school graduates.
   c. both a and b.

28. Suppose that state governments increase the funding for higher education and reduce the tuition that students must pay to attend college. Based on the labor supply/demand model, we should expect that this would cause the gap between the wages of college and high school graduates to
   a. increase.
   b. decrease.
   c. not change.

Answers.

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<tr>
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<td></td>
<td>Sherman Anti-trust</td>
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<tr>
<td>2</td>
<td>1.5</td>
<td>16</td>
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<td>18</td>
<td>a</td>
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<td>8</td>
<td>1500; 500,000</td>
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<td>9</td>
<td>10</td>
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<td>a</td>
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<td>10</td>
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<tr>
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<tr>
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<td>27</td>
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<tr>
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<td>b</td>
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