Homework on Labor Demand

1. Trans-Fat Corp. is setting up a small Twonky factory in Albany. Table 1 shows the hourly output in Twonkies associated with each level of employment.

<table>
<thead>
<tr>
<th>Workers</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>5</td>
<td>11</td>
<td>18</td>
<td>26</td>
<td>35</td>
<td>43</td>
<td>50</td>
<td>56</td>
<td>61</td>
<td>65</td>
<td>68</td>
<td>70</td>
</tr>
</tbody>
</table>

| Table 1 |

Table 1

a.) Tabulate and plot the marginal productivity and average productivity of labor curves for the factory.

b.) If a Twonky retails for $2 each. How many workers would the firm hire if the wage was $12/hr.

c.) Plot out the short run labor demand curve for the factory for wages between $4 and $20/hr.

d.) What is the elasticity of short-run labor demand for wages close to $12/hr.

e.) Suppose the price of Twonkies increases to $3. How many do they hire now.

f.) Suppose instead that the firm is considering expanding the factory so that output at every level of employment is twice as high. How many workers would they hire at $12/hr.

2. What are the short- and long-run effects on the amount of labor a firm hires if there is a permanent decrease in its output price? Explain each step in your analysis. (You do not need to provide analysis using isoquants, just use what we did in class to think about the long-run impact of the change.)