1. (4 points) Think about two goods (neither perfect substitutes nor perfect complements) you consume each week.
   (a) (2 points) Draw your own indifference curves and budget constraint for these goods. Label quantities (with units) on each axis, show your optimal consumption bundle and give your total spending (price times quantity) for this bundle.

   (b) (1 point) Assuming that you like both of these goods and spend only a fraction of your total budget on them, explain why you are not consuming more, as a means of reaching a higher indifference curve.

   (c) (1 point) Now the price of one of these goods doubles. Explain how you are likely to react, going forward, in terms of quantity demanded, elasticity, and so on.

2. (2 points) Give an example of price discrimination that favors you. Give a different example of discrimination that disfavors you.
3. (3 points) The government wants to help the poor by building subsidized housing in particular areas. Explain why this policy is unlikely to help the poor as much as an alternative policy that costs the same to taxpayers. Make sure you discuss budget constraints and transaction costs in your answer.

4. (6 points) Time for costs!
   
   (a) (3 points) Complete the following table, assuming fixed costs of 210. Don’t worry about decimals (answers within ±1 of the right answer will get full credit).

<table>
<thead>
<tr>
<th>Quantity</th>
<th>MC</th>
<th>AVC</th>
<th>ATC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>15</td>
<td></td>
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<tr>
<td>3</td>
<td>10</td>
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<td>4</td>
<td>5</td>
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<td>5</td>
<td>10</td>
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</tr>
<tr>
<td>6</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>21</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   (b) (2 points) Now draw the MC and AVC curves. Show where (in terms of quantities) the MC curve intersects the AVC curve.
(e) (1 point) Assuming a market price of 15, how many (whole) units should be produced? What's the profit or loss of the firm?

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5. (2 points) Why (and when) would your labor curve bend backwards, in terms of time and earnings?

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6. (3 points) What’s the advantage of organizing a cartel? Give two reasons why cartels might break down (ignoring that they are illegal in many places).

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7. (3 points) Let’s talk about the time value of money. Calculate the present value now of receiving €135 two years in the future, using a discount rate of 10 percent. Now consider a request for your impatient friend, who wants to borrow €100 from you now, with a repayment of €135 in two years. Is this a good deal for you? Does your answer change if your friend has only a 90 percent chance of paying you back? What if you’re risk averse when it comes to potential losses?

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8. (2 points) What aspect of “blackboard” economic theory that actually works in the real world do people you know often get wrong? Put differently: explain how people you know could improve their lives by applying basic economic idea that they do not currently use. (Hint: Maybe there’s something you learned in this class that changed your personal behavior.) Given an example and name/explain the theory that applies.