Section Exercise for January 27/28

1) Suppose that in the college town of Avicenna the price you get paid for teaching a yoga lesson is $10, and suppose that we have six workers whose daily productivity levels at teaching yoga (Y) or making lattes (L) is given by:

<table>
<thead>
<tr>
<th>Person</th>
<th>Yoga Lessons</th>
<th>Lattes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfred</td>
<td>50</td>
<td>1000</td>
</tr>
<tr>
<td>Flavius Aetius</td>
<td>125</td>
<td>250</td>
</tr>
<tr>
<td>Hendrik Antoon Lorentz</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Laxmibai</td>
<td>200</td>
<td>600</td>
</tr>
<tr>
<td>Olga Isopostolos</td>
<td>100</td>
<td>250</td>
</tr>
<tr>
<td>Thasunka Witko</td>
<td>200</td>
<td>100</td>
</tr>
</tbody>
</table>

a) Calculate the comparative advantage in producing lattes (L) of all six workers.

b) If only one person is going to be producing lattes, who should that one person be? Why?

c) If only one person is to be teaching yoga lessons, who should that one person be? Why?
d) Draw—on a graph—the supply curve for lattes from all six workers, assuming that the price of yoga lessons is $10/lesson.

e) Draw—on a graph—the supply curve for yoga lessons from all six workers, assuming that the price of lattes is $2/latte.

2) Suppose that in the college town of Avicenna the supply curve for lattes (L) is given by the equation:

\[ P = 1 + \frac{L_s}{10000} \]

where \( L_s \) is the number of lattes produced by suppliers, and that the demand curve for lattes is given by the equation:

\[ P = 10 - \frac{L_d}{5000} \]

where \( L_d \) is the number of lattes bought by consumers.
a) Draw—on a graph—the supply and demand curves.

b) What is the equilibrium price?

c) What is the equilibrium quantity?

d) Is the equilibrium price closest to the minimum opportunity cost of suppliers—the intercept of the supply curve and the y-axis—or to the maximum willingness to pay of consumers—the intercept of the demand curve and the x-axis? Why?

e) Suppose that the demand curve were to shift upward to:

\[ P = 16 - \frac{L_d}{5000} \]

what would the equilibrium price and quantity be?
f) Suppose that the demand curve were to rotate out to:

\[ P = 10 \]

what would the equilibrium price and quantity be?