Finance 30210
Midterm #1 Practice Questions

1) Suppose that you have the following demand and supply curve for sneakers:

\[ Q_d = 400 - 3P \]
\[ Q_s = 200 + 2P \]

a) Solve for the equilibrium price and quantity.
b) Calculate consumer expenditures on sneakers
c) Calculate the elasticity of demand at the equilibrium found in (a)

2) Consider the following productivities:

<table>
<thead>
<tr>
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<th>United States</th>
<th>England</th>
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</thead>
<tbody>
<tr>
<td>Services</td>
<td>6 Units/hr</td>
<td>3 Units/hr</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>2 Units/hr</td>
<td>6 Units/hr</td>
</tr>
</tbody>
</table>

a) Calculate the opportunity cost of services in the US and England
b) Calculate the opportunity cost of manufacturing in the US and England. Who has the comparative advantage in services?
c) Between what prices will trade occur?
d) Suppose that the relative price of services was one. What trading pattern would emerge?
e) Why do we only concern ourselves with relative prices in economics?

3) Suppose that you have estimated the following demand curve:

\[ Q = 120 - 4P + .001I \]

You know that the current market price is $10 and average income is $40,000.

a) Calculate the markets total willingness to pay.
b) Calculate the market’s consumer surplus.
4) Suppose that you estimated the following demand curve.

\[ Q = 400 - 6P + .005I \]

\( Q \) Represents quantity demanded, \( P \) represents price and \( I \) represents average income.

You know that the current market price is $20 and average income is $20,000

a) Calculate current demand.

b) Calculate the price elasticity of demand.

5) Suppose that you observed the following set of data:

Average Business School tuition: $30,000
Average Salary for non-MBA’s: $50,000 per year
Average MBA salary: $90,000 per year.

The length of an MBA program is 2 years and is assumed that and MBA will have a working career of 20 years after graduation.

a) Is this set of data consistent with market equilibrium?

b) If your answer to (a) is no, how will markets adjust?

6) Suppose that you have the following technology for producing output.

\[ y = k^{\frac{1}{3}} l^{\frac{1}{3}} \]

The price of labor is $7 per hour and capital costs $150 per unit. You are currently using 64 units of capital. You need to produce 100 units of output.

a) Calculate your optimal choice for capital and labor.

b) Calculate your total cost of production.

c) Calculate your average (unit) cost.