Elements of Macroeconomics: Homework #1

Name:____________________
Due 9/10 or 9/11 in assigned Section
Section:____________________

Part-A Short Questions

1. Fill in the blanks (10 points)
   
   a. Keynes said a good economist must be, in part, ________________, ________________, ________________ and ________________.
   
   b. The four attributes that help to think like an economist are, ________________, ________________, ________________, and ________________.
   
   c. The population of the United States is ________________.
   
   
   e. China per capita income, in dollars, 1990 to 2016, annualized growth rate was ______.
   
   f. ________________ is the highest valued alternative that must be given up to engage in an activity.
   
   g. According to ________________, markets, run by self-interested people, push Society toward desirable ends.
   
   h. Economists look at ________________, to give nation/states long run performance assessments.
   
   i. A market with few government restrictions on how a good or service can be produced or sold or on how a factor of production can be employed is called a ________________.
   
   j. A good for which the demand increases as the income falls and decreases as income rises is called an ________________.
PART-B  *Comparative Advantage vs. Absolute Advantage* (30 points)

2. Consider the following two production possibility schedules

<table>
<thead>
<tr>
<th></th>
<th>Onions (in millions)</th>
<th>Potatoes (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>France</strong></td>
<td>600</td>
<td>1,440</td>
</tr>
<tr>
<td><strong>India</strong></td>
<td>4,500</td>
<td>10,800</td>
</tr>
</tbody>
</table>

a. (3 points) What is the opportunity cost of producing one million potatoes in India?

b. (3 points) What is the opportunity cost of producing one million onions in France?

c. (3 points) What is the opportunity cost of producing one million onions in India?

d. (3 points) What is the opportunity cost of producing million potatoes in France?

e. (4 points) Which country has the comparative advantage in the production of potatoes?

f. (4 points) Which country has an absolute advantage in the production of onions?
g. (10 points) Draw production possibility frontiers, assuming a linear trade of between onions and potatoes for both countries. Then draw the combined production possibility frontier
PART-C Supply and Demand Analysis (40 points)

3. (20 points) The table below gives data on the ride share market in New York in 2017

<table>
<thead>
<tr>
<th></th>
<th>Price (in $ per mile)</th>
<th>Quantity (in thousands of miles driven)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uber</td>
<td>2.50</td>
<td>2,500</td>
</tr>
<tr>
<td>Lyft</td>
<td>3.00</td>
<td>1,000</td>
</tr>
</tbody>
</table>

a. (5 points) Label the graphs below so that we are in equilibrium.
(One graph is for Uber and the other is for Lyft)
Suppose in 2019 the Mayor of New York imposes mandatory anti-discrimination training for Uber drivers, but this is not required of Lyft drivers. In 2020 the market achieves a new equilibrium.
Suppose the new equilibrium price per mile for an Uber ride moves to $3.

b. (3 points) Did the supply curve or the demand curve shift for Uber rides?

c. (3 points) Did we move along the supply curve or the demand curve for Uber rides?

d. (3 points) Draw the shift in a graph below, so it correctly represents the new equilibrium.

e. (3 points) What is the new equilibrium quantity of Uber rides purchased?

f. (3 points) Should we expect this to affect the market for Lyft rides? If so, is it because they are substitutes or complements?
4. (20 points) Consider the market for guacamole. In this market, the supply curve is given by \( Q_s = 12P_g - 3P_a \) and the demand curve is given by \( Q_d = 100 - 20P_g + 15P_c \), where \( g \) denotes guacamole, \( a \) denotes avocados, and \( c \) denotes tortilla chips. (12 points)

(a) (5 points) Assume that \( P_a \) is fixed at $1 and \( P_c = 4 \). Calculate the equilibrium price and quantity in the guacamole market.

(b) (5 points) Suppose that a disease hits the avocado crop and raises the price of avocados to \( P_a = 2 \). Find the new equilibrium price and quantity of guacamole.
(c) (5 points) For part (b), identify the curve that would shift because of the disease. Illustrate in a graph below.

(d) (5 points) Suppose \( P_a = 1 \) but the price of tortilla chips drops to \( P_c = 3 \). Find the new equilibrium price and quantity of guacamole.