International Trade
Fall 2005
Quiz 3

1. Land and Labor are used to produce Beer and Spam. The country has 150 units of Labor and 100 units of Land. Unit factor requirements are as shown in the table below:

<table>
<thead>
<tr>
<th></th>
<th>$a_T$ (Land)</th>
<th>$a_L$ (Labor)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spam</td>
<td>1</td>
<td>1.25</td>
</tr>
<tr>
<td>Beer</td>
<td>0.5</td>
<td>1</td>
</tr>
</tbody>
</table>

A. (2 points) According to the Table, which industry is Labor intensive? _________________

B. (1 point) The graph at the right shows the resource constraints for Land and for Labor. Please identify which of the two straight lines is the Land resource constraint, based on the information given above: is it the solid line or the dashed line? _______________

C. (2 points) At the point labeled “X” in the graph, which of the following is true?

   i. Some Labor is unemployed and all Land is fully employed
   ii. Some Land is unemployed and all Labor is fully employed
   iii. More than 100 units of Land are needed to produce at this point
   iv. More than 150 units of Labor are needed to produce at this point.

D. (1 point) Draw the economy’s PPF in the graph.

E. (1 point) If the economy moves from producing at point “X” to producing at point “Y”, which of the following also occurs:

   i. The economy has to give up less Beer to produce every additional unit of Spam
   ii. All resources in the economy become fully employed
   iii. The economy has to give up more Beer to produce every additional unit of Spam
   iv. The industry that was Labor intensive at point X becomes Land intensive at point Y
2. The graph below shows a PPF for the economy that produces Wine and Cheese. Please assume each space represents 100 units of output. Suppose the price of Wine in terms of Cheese ($P_W/P_C$) is equal to 1/3. The production point that maximizes the total value of the country’s output is drawn in the graph with a large dot.

   i. (1 point) Which of the following must be true at this value-maximizing point (choose the best answer)?
   a. The slope of the PPF = 3
   b. The slope of the PPF > 3
   c. The slope of the PPF = 1/3
   d. The slope of the PPF < 1/3

   ii. (1 point) If the economy produces 500 units of Wine and 200 units of Cheese when the price of Wine in terms of Cheese equals 1/3, which of the following must be true (choose the best answer)?
   a. $\Delta C/\Delta W > P_W/P_C$
   b. $\Delta C/\Delta W < P_W/P_C$
   c. $\Delta C/\Delta W = P_W/P_C$
   d. $\Delta C/\Delta W > P_C/P_W$

   iii. (1 point) As you move up and to the left along the PPF above (i.e., produce more Cheese and less Wine), which of the following also occurs:
   a. The ratio of Land to Labor used in Wine production rises.
   b. The ratio of Land to Labor used in each industry remains unchanged.
   c. The ratio of Land to Labor used in Cheese production rises.
   d. There is not enough information to answer this question.