1. Multiple Choice. Please enter the best answer on the “bubble sheet.”

1. Opportunity cost refers to
   a. sunk costs;
   b. the best foregone alternative;
   c. the fact that there is not equal opportunity for all;
   d. the average cost of another unit;
   e. costs that are not recoverable.

2. Suppose that a gardener has $200 to spend on either annuals or perennials. The price of annuals is $5 and the price of perennials is $25. What is the relative price (opportunity cost) of a perennial?
   a. $25;
   b. 0.20 annuals;
   c. 5 annuals;
   d. $5;
   e. 8 perennials.

3. Sunk costs
   a. are not recoverable and are not opportunity costs;
   b. are recoverable but are not opportunity costs;
   c. are not recoverable but are opportunity costs;
   d. are recoverable and are opportunity costs;
   e. increase with the level of output.

4. The pattern of trade among nations is determined by
   a. diminishing returns;
   b. absolute advantage;
   c. comparative advantage;
   d. the GATT;
   e. the World Bank.

5. When a country imports more than it exports,
   a. it has a trade surplus;
   b. it has a trade deficit;
   c. capital flows in from abroad;
6. Scarcity is the idea that  
   a. the world will soon run out of exhaustible resources;  
   b. there is persistent poverty even in developed countries;  
   c. people must choose rationally even with imperfect information;  
   d. people want more than is freely available;  
   e. because there is a budget deficit, there is not enough money for new government programs.

7. The efficient level of an activity occurs where  
   a. marginal costs are at their lowest;  
   b. total costs are at their lowest;  
   c. total benefits are at their highest;  
   d. marginal costs equal marginal benefits;  
   e. sunk costs are zero.

8. If the United States has a comparative advantage in the production of a good, then  
   a. fewer resources are required to produce the good in the US.  
   b. the US also has an absolute advantage in the production of the good;  
   c. the relative cost of producing the good is lower in the US;  
   d. the US will import the good;  
   e. all of the above.

9. Suppose that the price of ski lift tickets increases. What is the effect on the market for skis?  
   a. Price and quantity increase.  
   b. Price and quantity decrease.  
   c. Price rises but quantity falls.  
   d. Price falls but quantity rises.  
   e. Price does not change, but there is a surplus.

10. Suppose that the gasoline tax is increased by 50 cents per gallon. The gas station owner is responsible for paying the tax. Which of the following best describes the effect of this tax increase?  
    a. The price of gasoline increases by 50 cents.  
    b. The price of gasoline remains the same.  
    c. The price of gasoline increases by less than 50 cents.  
    d. There will be a shortage of gasoline.  
    e. There will be a surplus of gasoline.

11. When the price of wheat increases, how is the bagel market affected? (Wheat is used to make bagels.)  
    a. Supply shifts to the left increasing price and reducing quantity.  
    b. Supply shifts to the right decreasing price and increasing quantity.
c. Demand shifts to the left decreasing price and quantity.
d. Demand shifts to the right increasing price and quantity.
e. Both demand and supply shift to the left reducing quantity. Price may rise or fall depending upon the relative strength of the demand and supply shifts.

12. When the market price lies above the market clearing price, there will be a
   a. shortage and then price will rise;
   b. surplus and then price will rise;
   c. shortage and then price will fall;
   d. surplus and then price will fall;
   e. no change in price unless there is growth in the money supply.
II. Problems

1. The university has just received a substantial donation of $1,000,000. With this money it can offer scholarships or hire new faculty. The cost of a new faculty member is $50,000 per year and scholarships cost $10,000 per year.

   a. Plot the budget constraint.

   b. What is the opportunity cost of a scholarship?

   ___________________________
2. **Comparative advantage.** The following table gives the annual productivities of typical workers in Portugal and France for wine and wheat.

<table>
<thead>
<tr>
<th></th>
<th>Portugal</th>
<th>France</th>
</tr>
</thead>
<tbody>
<tr>
<td>wine (cases)</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>wheat (000s bu)</td>
<td>18</td>
<td>24</td>
</tr>
</tbody>
</table>

a. Plot the production possibilities frontier.

b. In which good does Portugal have comparative advantage?

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c. Show and explain how both can gain from trade.
3. Use supply and demand analysis to show the impact of each of the following
   a. What is the impact of an increase in tuition on the market for college textbooks.
   b. How does a payroll tax (paid by employers) affect wages?
   c. What is the effect of a price ceiling set below the market clearing price on the market for automobile loans?