A. Multiple Choice (40 pts) Print A, B, C, D or E for the best (only one) of the available answers in the space below.

1. A  When we read that Bill Gates has given away $35bn since 1994, this is proof that
   [A. In giving away this much money, Bill Gates is pursuing his self interest.]
   [B. Money is not as scarce as creating an image to the larger audience.]
   [C. Bill Gates is acting randomly and has no real understanding of why he does what he does.]
   [D. Culture has taught us that wealth is not important.]
   [E. Bill Gates is not acting in a rational economic manner.]

2. C  Compare diamonds and water. Which of the following is true?
   [A. Diamonds are more valuable because we can’t recycle them, while nature recycles water constantly for us.]
   [B. Diamonds are more valuable because there are many more substitutes for diamonds than for water.]
   [C. The total value of the water we use annually is greater than the total value of the diamonds we use annually.]
   [D. It is a “market failure” when the price of diamonds is greater than the price of water.]
   [E. Each unit of water is more valuable than each unit of diamonds.]

3. B  What will make the price of orange juice rise?
   [A. If both demand for and supply of orange juice decrease.]
   [B. If demand increases at the same time that supply decreases.]
   [C. If demand decreases at the same time that supply increases.]
   [D. If demand stays the same while supply increases.]
   [E. If both demand for and supply of orange juice increase.]

4. B  What is the ‘cost’ to you of taking the Sky Train to school?
   [A. Almost everything because you couldn’t get to school any other way if the Sky Train wasn’t there.]
   [B. The value of everything you can’t have because you took the Sky Train to school.]
   [C. The value of all the resources used to build and operate the Sky Train.]
   [D. $2.85 (The regular fare price of a trip on the Sky Train).]
   [E. There is no cost because you couldn’t get to school any other way if the Sky Train wasn’t there.]

5. A  What should we call the area under the price of the amount we buy?
   [A. The revenue earned by the sellers.]
   [B. The total value of the quantity produced.]
   [C. The total gains from trade.]
   [D. The cost of producing this quantity.]
   [E. The consumer surplus.]

6. B  In one day, Anna can milk 1 cows or pick 3 kilos of carrots. Barney can milk 6 cows or pick 2 kilos of carrots. Cooper can milk 10 cows or pick 12 kilos of carrots.
   [A. Anna has the comparative advantage in milking but not in picking carrots.]
   [B. Anna has the comparative advantage in picking carrots but not in milking.]
   [C. Barney has the comparative advantage in picking carrots but not in milking.]
   [D. Cooper has the comparative advantage in milking but not in picking carrots.]
   [E. Cooper has the comparative advantage in picking carrots but not in milking.]

7. D  When is a community most likely to see a “shortage” of a product?
   [A. When there is a decrease in demand.]
   [B. When the product is very scarce.]
   [C. When the price is very high.]
   [D. When the money price is kept below the equilibrium price.]
   [E. When the money price is kept above the equilibrium price.]

NAME: Answers
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8. **C** How do we measure the true cost of producing a crop (like chickens) which irritates neighbors with smells?  
   A. It the area under the market supply of the market equilibrium quantity.  
   B. It the area under the true supply of the optimal quantity.  
   C. It is the area under the true supply of the market equilibrium quantity.  
   D. It is the area under the market supply of the optimal quantity.  
   E. It is area under the market demand of the market equilibrium quantity.

9. **E** Collusion rarely succeeds for long because firms which collude find it difficult to:  
   A. Keep partners from cutting production even further.  
   B. Stop predatory pricing.  
   C. Stop price discrimination which will anger customers.  
   D. Keep their costs low.  
   E. Keep partners from offering discounts or stop new firms from entering competition.

10. **E** Laws passed by government to stop companies from capturing too large a share of the market:  
   A. Increase the choices that are available to consumers.  
   B. Keep prices lower than they would otherwise be.  
   C. Save competition.  
   D. Lower the costs of companies without reducing the prices they charge to consumers.  
   E. Often reduce competition in the name of helping competition.

B. Demand and Supply (39 pts) SHOW WORK CLEARLY FOR PARTIAL CREDIT!!

**PRICE:**

<table>
<thead>
<tr>
<th>PRICE</th>
<th>24</th>
<th>48</th>
<th>72</th>
<th>etc.,</th>
<th>( \Delta P = \frac{1}{2} )</th>
<th>( \Delta P = \frac{1}{4} )</th>
<th>( \Delta P = \frac{1}{16} )</th>
<th>( \Delta P = \frac{1}{32} )</th>
<th>( \Delta P = \frac{1}{64} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity Demanded:</td>
<td>10</td>
<td>6</td>
<td>2</td>
<td>etc.,</td>
<td>( \Delta Q = \frac{1}{2} )</td>
<td>( \Delta Q = \frac{1}{4} )</td>
<td>( \Delta Q = \frac{1}{16} )</td>
<td>( \Delta Q = \frac{1}{32} )</td>
<td>( \Delta Q = \frac{1}{64} )</td>
</tr>
<tr>
<td>Available Production:</td>
<td>5</td>
<td>11</td>
<td>17</td>
<td>etc.,</td>
<td>( \Delta Q = \frac{1}{2} )</td>
<td>( \Delta Q = \frac{1}{4} )</td>
<td>( \Delta Q = \frac{1}{16} )</td>
<td>( \Delta Q = \frac{1}{32} )</td>
<td>( \Delta Q = \frac{1}{64} )</td>
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</table>

1. **Q^d = 14 - \frac{1}{6}P**  
   What is the demand equation \( Q_d = f(P) \)?

2. **Q^s = -1 + \frac{1}{4}P**  
   What is the supply equation \( Q_s = f(P) \)?

3. **\( \frac{36+4}{2} \) \( \frac{8}{2} \) = 160**  
   What is the “cost” at equilibrium?

4. **\( \frac{48}{2} \) \( \frac{9}{2} \) = 192**  
   What is the “consumer surplus” at equilibrium?

5. **\( \min \left[ \frac{7}{2}, \frac{9}{2}, \frac{5}{2} \right] = \frac{7}{2} \)**  
   Suppose the government brings in a price ceiling at \$42. What is quantity traded?

6. **\( \min \left[ \frac{3}{2}, \frac{5}{2}, \frac{10}{2} \right] = \frac{3}{2} \)**  
   At this price ceiling, what is the producer surplus?

7. **\( \frac{49}{2} \) \( \frac{9}{2} \) \( \frac{1}{2} \) = 45**  
   Calculate the CHANGE in consumer surplus caused by this price ceiling.

8. **MR = 8 - \frac{1}{2}Q**  
   What is the marginal revenue curve \( MR = f(Q) \)?

9. **MC = 4 + \frac{1}{2}Q**  
   What is the marginal cost curve \( MC = f(Q) \)?

10. **Q = \frac{6}{5} = 1.2**  
    What is the Q that maximizes producer surplus for a price searcher?  
    \( \frac{4 - Q^2}{2} = \frac{5}{2} \)  
    \( Q^2 = 2 \)  
    \( Q = 2 \)

11. **\( \frac{50}{2} \) \( \frac{30}{2} \) = 200**  
    What is the P that maximizes producer surplus for a price searcher?

12. **\( \frac{50}{2} \) \( \frac{30}{2} \) = -45**  
    What is the producer surplus that a price searcher will earn?

13. **What is the waste (dead weight loss) caused by the price searcher?**
C. Comparative Statics (5 pts) Draw a quick diagram and show how the demand or supply curves (or both) will shift and what will happen to equilibrium price and quantity. Use tiny arrows to show the direction of change. Then circle the correct choice in the following sentences.

What happens to the market for Pepsi if a new study finds that one of the secret ingredients in Coca Cola can lead to a longer healthier life?

Demand will shift: RIGHT/LEFT/NO SHIFT
Supply will shift: RIGHT/LEFT/NO SHIFT
Equilibrium price will RISE/FALL/UNCERTAIN CHANGE
Equilibrium quantity will RISE/FALL/UNCERTAIN CHANGE

D. Textbook Question (6 pts) Use a paragraph. According to the textbook (p. 6) “Prices are determined by the market, not by a producer.” In our everyday conversation with each other, we might say something like “my landlord raised my rent”. Why does our textbook say this is incorrect?

E. Short Essay (10 pts) Use a diagram to illustrate your answer. Then explain your diagram. Only a paragraph or two is necessary.

Many people in BC believe that good farmland should be saved for growing food. In BC, our government has created an “Agricultural Land Reserve (ALR)” which restricts the use of good farmland (you can’t use good farmland for industries or housing). What does this restriction do to the cost of housing in BC? Do you think this ALR reduces total gains from trade or increases it? Explain.