### Answers to the PRACTICESHEET: SUPPLY – DEMAND

Draw a well-labeled graph and complete the analysis using the last item on your Notesheet as a model.

<table>
<thead>
<tr>
<th>No.</th>
<th>Prompt</th>
<th>Graph</th>
<th>Eco Analysis</th>
</tr>
</thead>
</table>
| 1   | It becomes known that an electronics store is going to have a sale on their computer games 3 months from now. *(Note: Students want to think in terms of the future, not the present--now.)* | ![Graph 1](image) | 1. Equilibrium Before – $P_1$, $Q_1$
2. Change – Sale in 3 months
   - Supply or Demand first? Demand
   - Determinant? $\Delta$ Consumer expectations
   - Increase or decrease? demand decreases, shifts inward or left now
3. Equilibrium After – $P_2$, $Q_2$
   - Price $\downarrow$, Quantity $\downarrow$ |
| 2   | The workers who produce the computer games go on strike for over two months *(Note: The determinant is $\Delta$ resource price – and availability.)* | ![Graph 2](image) | 1. Equilibrium Before – $P_1$, $Q_1$
2. Change – workers strike
   - Supply or Demand first? supply
   - Determinant? $\Delta$ resource prices
   - Increase or decrease? supply decreases, shifts inward or left *(Don’t say “up”)*
3. Equilibrium After – $P_2$, $Q_2$
   - Price $\uparrow$, Quantity $\downarrow$ |
| 3   | The workers who produce the computer games receive a $2 per hour wage increase. *(Note: The per unit cost rises. Holding all else constant, the firm can’t afford to hire as many.)* | ![Graph 3](image) | 1. Before – $P_1$, $Q_1$
2. Change – Workers get pay raise
   - Supply or Demand first? demand
   - Determinant? $\Delta$ Resource price of labor
   - Increase or decrease? supply decreases, shifts inward or left
3. After – $P_2$, $Q_2$
   - Price $\uparrow$, Quantity $\downarrow$ |
| 4   | When the average price of movie tickets rises, it has an effect on the purchase of computer games. *(Analyze computer games.)* *(Note: People play games instead of going to the movies as much for fun.)* | ![Graph 4](image) | 1. Before – $P_1$, $Q_1$
2. Change – Price of movie tickets $\uparrow$
   - Supply or Demand first? demand
   - Determinant? $\Delta$ price of substitute good
   - Increase or decrease? demand for games increases, curve shifts right or outward
3. After – $P_2$, $Q_2$
   - Price $\uparrow$, Quantity $\uparrow$ |
| 5   | The price of business software, a product also supplied by computer game software producers, rises. *(Note: With limited resources, if firm produces more for business, then they produce fewer games.)* | ![Graph 5](image) | 1. Before – $P_1$, $Q_1$
2. Change – firm produces business software
   - Supply or Demand first? supply
   - Determinant? $\Delta$ price of other goods
   - Increase or decrease? supply of games decreases, curve shifts inward or left
3. After – $P_2$, $Q_2$
   - Price $\uparrow$, Quantity $\downarrow$ |
| 6   | A reputable private research institute announces that children who play computer games also improve their grades in school. | ![Graph 6](image) | 1. Before – $P_1$, $Q_1$
2. Change – Games good for kids
   - Supply or Demand first? Demand
   - Determinant- expectations or buyer tastes
   - Increase or decrease? demand increases, curve shifts outward or to the right
3. After – $P_2$, $Q_2$
   - Price $\downarrow$, Quantity $\uparrow$ |
| 7   | Because of the use of mass production techniques, fewer workers are needed to produce games. *(Note: Businesses use the least cost combination of resources, so tech $\uparrow$, labor $\downarrow$.* | ![Graph 7](image) | 1. Equilibrium Before – $P_1$, $Q_1$
2. Change – Better technology and less labor
   - Supply or Demand first? supply
   - Determinant? $\Delta$ technology/techniques
   - Increase or decrease? supply increases
3. Equilibrium After – $P_2$, $Q_2$
   - Price $\downarrow$, Quantity $\uparrow$ |
8. The price of computers increases. (Analyze computer games.) (Note: Computers and computer games are complementary goods. When P↑ for computers, fewer computers & games sold.)

9. The Federal government imposes a $5 per game tax on the manufacturers of the games. (Note: The tax is on manufacturer, not buyers, so per unit costs rise. All else constant they can't produce as much.)

10. The manufacturer of the computer games raises the price on the games. (Note: This is the trick question. Since the price of games changes, there is Δ Quantity Demanded and Supplied, not Δ Demand.)

11. The popularity of the computer games increases in the world markets. At the same time new technology lowers production costs. (Note: Two curves move at once. Price is indeterminate, but Quantity increases.)

12. A large firm enters the game business with a new line of exciting games. (Analyze the whole game industry.)

13. In order make computer games available to low-income families, Congress sets a price ceiling for the games.

14. In order to protect American producers of computer games from foreign competition, Congress imposes high trade barriers against foreign-made games. (Analyze the American firms.)

1. Equilibrium Before – P₁, Q₁
2. Change – Price computers ↑, Q↓
   Supply or Demand first? demand
   Determinant? price of complementary good
   Increase or decrease? demand decreases, curve shifts inward or left
3. Equilibrium After – P₂, Q₂
   Price ↓, Quantity ↓

1. Equilibrium Before – P₁, Q₁
2. Change – Tax on manufacturer Supplier or Demand first? supply
   Determinant? Δ taxes & subsidies
   Increase or decrease? supply decreases, curve shifts inward or left
3. Equilibrium After – P₂, Q₂
   Price ↑, Quantity ↓

1. Equilibrium Before – P₁, Q₁
2. Change – Price of computer games rises Supply or Demand first? neither
   Determinant? Price is the independent variable; no shift, move along curves
   Increase or decrease? QS↑, QD↓
3. Equilibrium After – Disequilibrium
   Price ↑, Quantity – QS > QD – a surplus

1. Equilibrium Before – P₁, Q₁
2. Change –
   Demand ↑ - Determinant - # buyers ↑
   Supply ↑ - Determinant – new technology
   Increase or decrease? Both Supply & Demand increase & curves shift out to right.
3. Equilibrium After – P₂, Q₂
   Price indeterminate, Quantity ↑

1. Equilibrium Before – P₁, Q₁
2. Change –
   a new competing producer
   Supply or Demand first? supply
   Determinant? Δ # of suppliers
   Increase or decrease? supply in the industry increase and shifts outward to right
3. Equilibrium After – P₂, Q₂
   Price ↓, Quantity ↑

1. Equilibrium Before – P₁, Q₁
2. Change – Govt. sets price ceiling Supply or Demand first? neither
   Determinant? Δ price--the primary variable, no shift; move along each curve
   Increase or decrease? QS↓, QD↑
3. Equilibrium After – Disequilibrium
   Price ↑, Quantity - QS>QD - a shortage

Numbers 1-9 are taken from The Study Guide by Walstad and Bingham that accompanies McConnell and Brue's Economics, p. 35, exercise 7. Numbers 10-14 were created by Sally Dickson.