

## AP Microeconomics Unit 2 Study Guide

**Directions:** Answer the following questions as completely as possible on a separate sheet of paper, stapled to the front of this handout. Do not wait until the night before the test to start this! You may complete the charts directly on the handout.

**Due date:** Wednesday, February 27<sup>th</sup> (B day) & Thursday, February 28<sup>th</sup> (A day)

### **Part A:** Types of Elasticity

**Resources:** Chapter 20 of textbook; “Elasticity” PowerPoint

1. What does price elasticity of demand measure?
2. What are the determinants of price elasticity of demand?
3. Write the price elasticity of demand **percent-change formula**. You need to know how to use this and how to interpret the result.
4. What are the ranges of elasticity of demand? (Hint: there are 5)
5. Write the midpoint formula for price elasticity of demand. You need to know how to use this when given price and quantity data, and how to interpret the result.
6. What is the basic formula for total revenue?
7. Explain the total revenue test (relationship between price & TR and how this relates to elasticity).
8. Write the cross-price elasticity of demand formula. What does this measure?
9. Write the income elasticity of demand formula. What does this measure?
10. Complete the following chart:

Value of Coefficient	Description	Type of Good(s) & Example
<i>Cross-price elasticity:</i>		
Positive	Quantity demanded of good X changes in the same direction as price of good Y	
Negative	Quantity demanded of good X changes in the opposite direction of price of good Y	
<i>Income elasticity:</i>		
Positive	Quantity demanded of the product changes in the same direction as income	
Negative	Quantity demanded of the product changes in the opposite direction of income	

11. Write the elasticity of supply formula. What does this measure?
12. Complete the following chart:

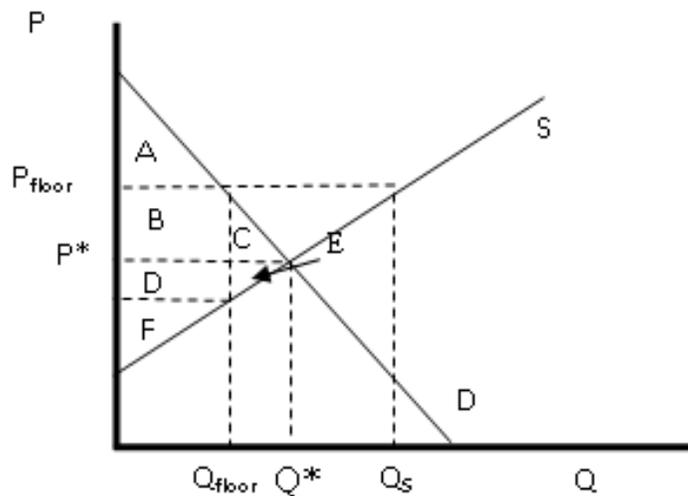
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<i>Elasticity of Supply</i>			
Time period:	Market Period	Short Run	Long Run
Brief description of time period (or use tomato farmer example):			
How elastic is supply during this time period?			

**Part B:** Total Welfare, Price Controls, Excise Taxes, & Trade Barriers

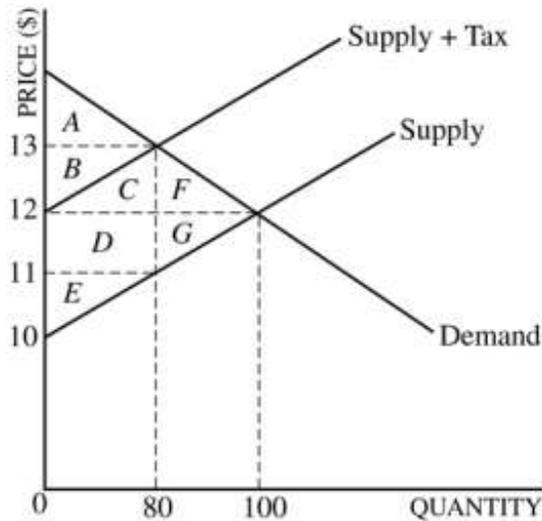
*Resources:* End of Chapter 3 of textbook (p. 52-55); “Total Welfare & Government Intervention” PowerPoint; graphing notes handout; “Excise Taxes, Subsidies, & Trade Barriers” PowerPoint

13. Define consumer surplus and producer surplus.
14. How can you calculate total welfare (a.k.a. total surplus)?
15. Define price floor and price ceiling.
16. Draw two market diagrams side-by-side, each for Good X. Demonstrate an effective price floor on the first diagram, and an effective price ceiling on the second. Be sure to label the following:
  - a. The original equilibrium price and quantity
  - b. The price floor or ceiling
  - c. The resulting quantity demanded and quantity supplied after the price control is added.
  - d. The resulting surplus (excess supply) or shortage (excess demand).
17. Define deadweight loss.
18. Identify the following areas on the graph below (and know how to calculate them when given price and quantity data). This particular graph demonstrates the effect of a price floor.
  - a. Consumer surplus (use letters) – before and after the price floor
  - b. Producer surplus (use letters) – before and after the price floor
  - c. Deadweight loss (use letters) resulting from the price floor

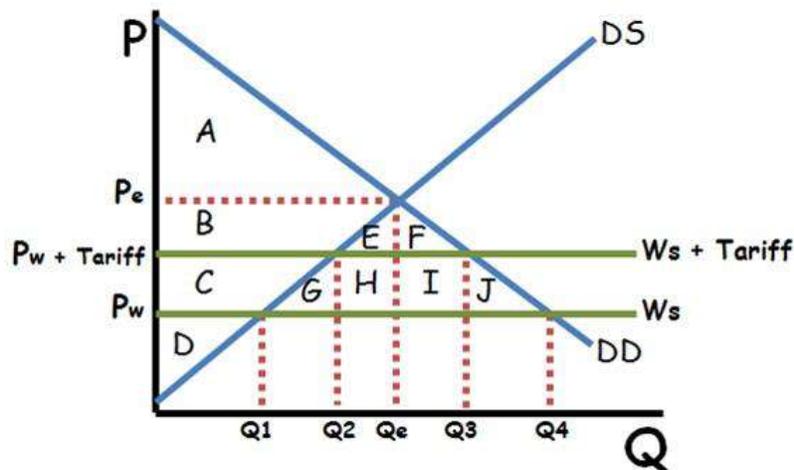


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19. Describe the difference between a protective tariff, a revenue tariff, and a quota.
20. Identify the following areas on the graph below (and know how to calculate them when given price and quantity data). This particular graph demonstrates the effect of an excise tax.
- Consumer surplus (use letters) – before and after the tax
  - Producer surplus (use letters) – before and after the tax
  - Per-unit tax amount (use dollar amount)
  - Government tax revenue (use letters)
  - Deadweight loss (use letters) resulting from the tax



21. Identify the following areas on the graph below (and know how to calculate them when given price and quantity data). This particular graph demonstrates the effect of a tariff.
- Consumer surplus (use letters) – before and after the tariff
  - Producer surplus (use letters) – before and after the tariff
  - Government tax revenue (use letters)
  - Deadweight loss (use letters) resulting from the tariff



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**Part C: Theory of Consumer Choice**

Resources: Chapter 21 of textbook; notes on consumer choice/utility maximization

22. Explain the purpose and technique of marginal analysis.
23. What is the difference between total utility and marginal utility?
24. Explain the law of diminishing marginal utility.
25. How do the substitution effect and the income effect help explain the downward sloping demand curve?
26. What is utility, and what units do we use to measure it in economics? Is this an objective or subjective measurement?
27. List 5 key assumptions made when applying the theory of consumer choice.
28. Complete the following table.

<b>Cookie Consumption</b>		
<b>Quantity</b>	<b>Total Utility (TU)</b>	<b>Marginal Utility (MU)</b>
0	0	---
1	10	10
2		8
3	25	
4	30	
5		3
6	34	

29. What are the two conditions of the utility-maximizing rule?
30. Calculate the marginal utility per dollar to complete the following table. How many of each item should Mr. Clifford consume to maximize his utility if his income is \$9 (he has \$9 to spend on these products today)? The price of coffee is \$2 per cup and the price of cookies is \$1 per cookie.

<b>Quantity</b>	<b>Marginal Utility (MU) of coffee</b>	<b>Marginal Utility per Dollar (MU / P) of coffee</b>	<b>Marginal Utility (MU) of cookies</b>	<b>Marginal Utility per Dollar (MU / P) of cookies</b>
1	10		8	
2	8		7	
3	6		6	
4	4		5	
5	3		4	
6	2		3	