

III. The AP Course Outline

The course outline for AP Microeconomics is provided below. This outline shows the content areas covered in the course and the percentage of the course/exam devoted to that material. Be aware that the first section of the AP Microeconomics course outline overlaps with the beginning sections of the AP Macroeconomics course outline.

Content area *(Percentage of the exam—Multiple-Choice section)*

I. Basic Economic Concepts (8-14%)

- A. Scarcity, choice, and opportunity cost
- B. Production possibilities curve
- C. Comparative advantage, absolute advantage, specialization, and trade
- D. Economic systems
- E. Property rights and the role of incentives
- F. Marginal analysis

II. The Nature and Functions of Product Markets (55-70%)

- A. Supply and demand (15-20%)
 - 1. Market equilibrium
 - 2. Determinants of supply and demand
 - 3. Price and quantity controls
 - 4. Elasticity
 - 5. Consumer surplus, producer surplus, and market efficiency
 - 6. Tax incidence and deadweight loss
- B. Theory of consumer choice (5-10%)
- C. Production and costs (10-15%)
- D. Firm behavior and market structure (25-35%)
 - 1. Profit
 - 2. Perfect competition
 - 3. Monopoly
 - 4. Oligopoly
 - 5. Monopolistic competition

III. Factor Markets (10-18%)

- A. Derived factor demand
- B. Marginal revenue product
- C. Labor market and firms' hiring of labor
- D. Market distribution of income

IV. Market Failure and the Role of Government (12-18%)

- A. Externalities
- B. Public goods
- C. Public policy to promote competition
- D. Income distribution

You are trying to rack up as many points as possible. So when in doubt, give it your best shot and guess; you just might get lucky. The worst thing that can happen is that no point will be earned (which will happen if you leave the questions blank, too).

Unlike tests that you might take in a class, the AP exams do not use “all of the above,” none of the above,” or “true/false” questions. Instead, the multiple-choice questions you will encounter will come in five different formats. The most common question type asks you to either define or classify concepts learned in economics. The next most common question type is best described as cause-and-effect. Less common are questions that ask you to calculate an answer or interpret a graph. The least common question type is the I, II, III style.

Free Response

The second section of the AP Microeconomics exam is made up of three free-response questions. The time allocated to the free-response section is broken down into two parts: a planning period and a writing period. The free-response section of the exam begins with a ten-minute planning period in which you can read over the questions and map out your response. You will receive a sheet with the test questions on it. You may write any notes you would like on this sheet, but remember that nothing on this sheet will be graded. You must write all of your answers in the test booklet provided. Answers should be written in blue or black ink only. At the end of the planning period, you are allowed 50 minutes to answer the free-response questions in the answer book.

The first free-response question is the longest and most comprehensive, and you should allocate roughly half of your time, about 25 minutes, to answering it. The second and third free response questions are shorter and typically test a particular area of the course outline. You should allocate roughly a quarter of the time available, or about 12–13 minutes, to each of the shorter questions. Allocate and monitor your time carefully so that you are able to provide at least a basic response to each question.

V. Planning Your Test Preparation and Review

The following test is designed to help you assess the strengths and weaknesses of your knowledge of AP Microeconomics. The test is composed of 60 multiple-choice questions each with 5 answer choices. This test is for diagnostic purposes and does not include free-response questions. Allow yourself 70 minutes to take this diagnostic test. The use of a calculator is not permitted on the AP exam, so do not use one on this test either. If you are uncertain of the correct answer, make an educated guess.

The answers, along with explanations, are provided below. In addition, the answer key correlates each question with a section on the AP Course Outline. When you are finished, take time to review the answers to the questions you missed and assess which areas of the course outline you have mastered and which you need to review. Use your results to allocate your study time before the AP exam. Good luck!

Diagnostic Test

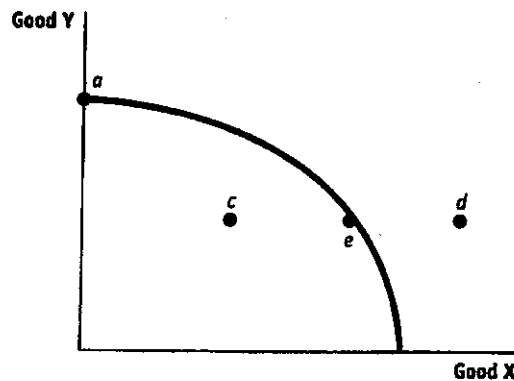
1. Which of the following is an opportunity cost of going to college?
 - A. tuition
 - B. room and board
 - C. books and supplies
 - D. transportation
 - E. forgone earnings

2. The following table shows the cost of purchasing different quantities of cookies at a bakery. Based on this information, what is the marginal cost of the third cookie?

Number of Cookies	Cost
0	0
1	\$1.00
2	\$1.75
3	\$2.25
4	\$2.50
5	\$2.60

- A. \$0
 B. \$0.50
 C. \$1.75
 D. \$2.25
 E. \$5.00
3. A market economy allocates resources primarily through which of the following?
- A. government agencies
 B. voluntary exchange of goods and services
 C. the decisions of large businesses
 D. social conventions
 E. historical preferences

Questions 4 and 5 refer to the graph below, which shows an economy's production possibilities curve for the production of goods "X" and "Y."

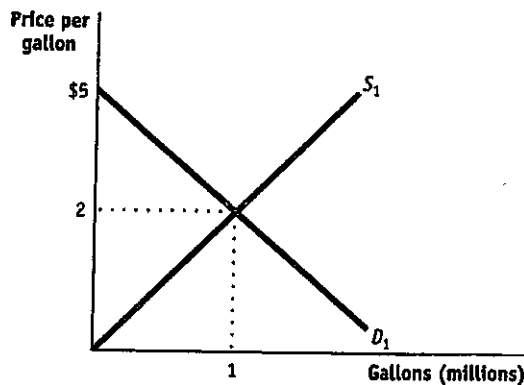


4. Which of the following points represent an inefficient use of resources?
- A. a
 B. b
 C. c
 D. d
 E. e

5. Given its current production possibilities, this economy cannot produce at which point(s)?
- A. a
 - B. b
 - C. c
 - D. d
 - E. c or d
6. Which of the following can lead to an inward shift of the production possibilities curve?
- A. an increase in unemployment
 - B. a decrease in the labor force
 - C. an increase in prices
 - D. a technological advance
 - E. a recession
7. Which of the following will shift the demand curve for gasoline to the right?
- A. a decrease in the price of gasoline
 - B. a decrease in the price of cars
 - C. a decrease in the price of crude oil
 - D. an increase in the average fuel efficiency of cars
 - E. a decrease in the number of businesses that sell gasoline
8. An increase in the wages of textile workers will most likely lead to which of the following?
- A. an increase in the demand for textiles
 - B. a decrease in the demand for textiles
 - C. an increase in the supply of textiles
 - D. a decrease in the supply of textiles
 - E. an increase in both the supply and demand for textiles
9. If an increase in the price of good X leads to a decrease in the demand for good Y, which of the following must be true?
- A. X is a normal good.
 - B. Y is an inferior good.
 - C. Both X and Y are normal goods.
 - D. X and Y are complements.
 - E. X and Y are substitutes.
10. If both supply and demand for a good increase, which of the following is true?
- A. Price will increase.
 - B. Price will decrease.
 - C. Quantity will increase.
 - D. Quantity will decrease.
 - E. Quantity may increase, decrease, or remain the same.
11. Which of the following is true of an effective price ceiling?
- A. It is put in place to help producers.
 - B. It must be set below equilibrium.
 - C. It will increase the quantity of the good sold in the market.
 - D. It will create a surplus in the market.
 - E. It will not change the quantity of the good demanded or supplied.

12. If a 10 percent increase in price leads to no change in quantity demanded, the demand curve is
- indeterminate.
 - downward sloping.
 - vertical.
 - horizontal.
 - asymptotic.
13. When price elasticity of demand is less than 1, what should a firm do if it wants to increase its total revenue?
- decrease the price
 - raise the price
 - produce less
 - reduce costs
 - sell more
14. When Yolanda's income increases from \$40,000 to \$60,000, she increases her purchases of good X from 90 to 110. Which of the following is true? Yolanda's income elasticity of demand for good X is
- .5 and X is a normal good.
 - .5 and X is an inferior good.
 - 2 and X is a normal good.
 - 2 and X is an inferior good.
 - 2 and X is an inferior good.
15. A decrease in the supply of a good will have what effect on consumer surplus, producer surplus, and total surplus in the market?
- | Consumer surplus | Producer surplus | Total surplus |
|------------------|------------------|---------------|
| A. Increase | Increase | Increase |
| B. Increase | Decrease | Decrease |
| C. Decrease | Decrease | Decrease |
| D. Decrease | Decrease | Increase |
| E. Decrease | Increase | Decrease |

Refer to the graph of the gasoline market below to answer questions 16 and 17.



16. At equilibrium in this market, how much does total surplus equal?
- A. \$1.0 million
 - B. \$1.5 million
 - C. \$2.5 million
 - D. \$4.0 million
 - E. \$5 million
17. If the government imposes a tax of \$1 per gallon on sellers in the market, which of the following is true?
- A. Sellers will raise the price of gasoline by \$1.
 - B. Profit from gasoline sales will be reduced by \$1 per gallon.
 - C. Total surplus in the market will increase.
 - D. The government will receive an increase in tax revenue of \$1 million.
 - E. The tax will lead to deadweight loss.
18. Which of the following will eventually decrease as an individual consumes additional units of a good?
- A. marginal utility
 - B. average utility
 - C. total utility
 - D. marginal product
 - E. marginal revenue product

The table below shows the marginal utility a consumer receives from consuming good X. Use the information in the table to answer the following question.

Q	MU
0	
1	10
2	8
3	5
4	4
5	3

19. The total utility the consumer receives from consuming 2 units of good X is
- A. 2
 - B. 3
 - C. 8
 - D. 10
 - E. 18
20. A consumer has \$1000 to spend on goods A and B. She is currently consuming 50 units of good A and 25 units of good B. The marginal utility she receives for good A is 50, and the marginal utility she receives from good B is 100. If the price of good A is \$10 and the price of good B is \$20, which of the following should she do in order to maximize her utility?
- A. continue to consume the current amounts of good A and good B
 - B. consume less of good B
 - C. consume more of good A and less of good B
 - D. consume less of good A and more of good B
 - E. consume more of goods A and B

Use the information in the table below to answer questions 21 and 22.

Units of labor	Output
0	0
1	8
2	18
3	26
4	32
5	36
6	38
7	36

21. The marginal product of the fourth unit of labor is
- A. 84
 - B. 32
 - C. 8
 - D. 6
 - E. 4
22. The average product of the second unit of labor is
- A. 26
 - B. 18
 - C. 10
 - D. 9
 - E. 8
23. A firm has a fixed amount of capital. As the firm increases production, the additional output that results from hiring additional units of labor declines. This is an example of which of the following?
- A. diseconomies of scale
 - B. economies of scale
 - C. diminishing returns
 - D. declining marginal revenue product
 - E. the law of supply
24. Which of the following is true in the short run?
- A. All inputs are fixed.
 - B. There are no variable factors.
 - C. At least one factor is fixed.
 - D. The firm cannot vary its output level.
 - E. Firms initially experience economies of scale.
25. A firm is producing the desired level of output using 40 units of capital and 120 units of labor. The marginal product of capital is 50, and the marginal product of labor is 48. The price of a unit of labor is \$10, and the price of a unit of capital is \$6. To minimize costs, the firm should
- A. continue using the current combination of capital and labor.
 - B. use more capital and less labor.
 - C. use less capital and more labor.
 - D. use more capital and more labor.
 - E. shut down.

26. If a firm is earning a normal profit, what must be true of the firm's accounting profit? It is
- zero.
 - negative.
 - positive.
 - increasing.
 - less than economic profit.
27. A firm will maximize profits by producing at the quantity where marginal cost
- crosses the minimum of the average total cost curve.
 - is maximized.
 - is minimized.
 - equals marginal revenue.
 - begins increasing at a decreasing rate.
28. If average cost is decreasing, marginal cost must be
- increasing.
 - decreasing.
 - above average cost.
 - below average cost.
 - equal to average cost.
29. Which of the following is true of the marginal revenue curve for a perfectly competitive firm?
- It is equal to the average total cost curve.
 - It is equal to the demand curve.
 - It is equal to the marginal cost curve above average variable cost.
 - It is vertical at the profit-maximizing level of output.
 - The firm does not have a marginal revenue curve.

Use the information in the table below to answer questions 30 and 31.

Q	TC
0	\$4
1	10
2	12
3	16
4	22
5	30
6	40
7	52
8	66
9	82

30. If price is \$8, what is the firm's profit-maximizing level of output?
- 0
 - 1
 - 3
 - 5
 - 7

31. If the price is \$8, what is the firm's maximum profit?

- A. \$10
- B. \$30
- C. \$40
- D. \$70
- E. 0

32. What will happen in a perfectly competitive market if firms are earning a profit?

- A. Supply and price will increase.
- B. Supply will increase and price will decrease.
- C. Demand and price will increase.
- D. Demand will increase and price will decrease.
- E. Demand will increase and price will increase.

33. Which of the following is true of perfectly competitive firms in the long run?

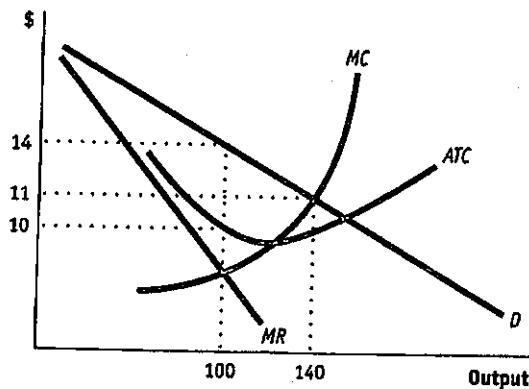
- I. They earn a normal profit.
- II. They maximize profit at the level of output at which $MC = MR$.
- III. They produce at minimum average total cost.

- A. I only
- B. II only
- C. III only
- D. Both I and II
- E. I, II, and III

34. Allocative efficiency occurs when the market produces the level of output at which price is equal to

- A. marginal revenue.
- B. demand.
- C. average total cost.
- D. marginal cost.
- E. minimum average variable cost.

Refer to the graph below to answer questions 35-36.



35. What are the profit-maximizing price and quantity for the monopoly shown on the graph?

- | Price | Quantity |
|-------|----------|
| A. 10 | 100 |
| B. 10 | 140 |
| C. 11 | 140 |
| D. 14 | 100 |
| E. 14 | 140 |

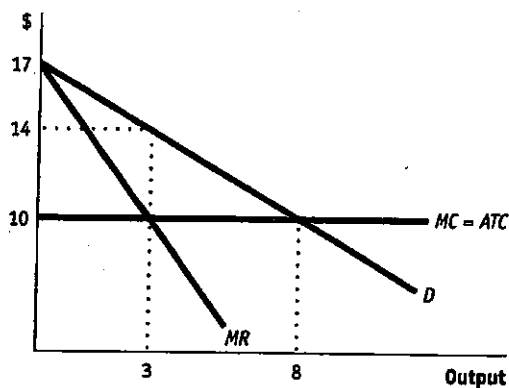
36. The monopoly shown on the graph is earning a _____ of _____.

- A. profit; \$100
- B. profit; \$300
- C. profit; \$400
- D. loss; \$140
- E. loss; \$560

37. Compared with firms in a perfectly competitive industry, a monopoly will

- A. produce a higher quantity.
- B. produce an efficient level of output.
- C. charge a lower price.
- D. produce at a lower average total cost.
- E. create deadweight loss.

Questions 38 refers to the graph below.



38. A monopoly in this industry would lead to a deadweight loss equal to how much?

- A. \$0
- B. \$4.5
- C. \$10
- D. \$12
- E. \$28

39. Which of the following would result if a natural monopoly were required to charge a price equal to average cost? The monopoly would

- A. achieve allocatively efficiency.
- B. achieve productive efficiency.
- C. operate at a loss.
- D. earn a normal profit.
- E. eliminate deadweight loss.

40. Which of the following is true of price discrimination?

- I. It can be practiced only by firms with market power.
- II. It results in a decrease in consumer surplus.
- III. It results in increased profit.

- A. I only
- B. II only
- C. III only
- D. I and III only
- E. I, II, and III

41. The oligopoly market structure is unique in that it assumes which of the following characteristics?
- A. interdependence of firms
 - B. product differentiation
 - C. barriers to entry
 - D. more than one firm
 - E. long-run normal profit

Refer to the payoff matrix below to answer questions 42 and 43.

		Firm #1	
		Advertise	Don't advertise
Firm #2	Advertise	\$0.5m, \$1.5m	\$0.5m, \$1.5m
	Don't advertise	\$0.5m, \$1.5m	\$0.5m, \$1.5m

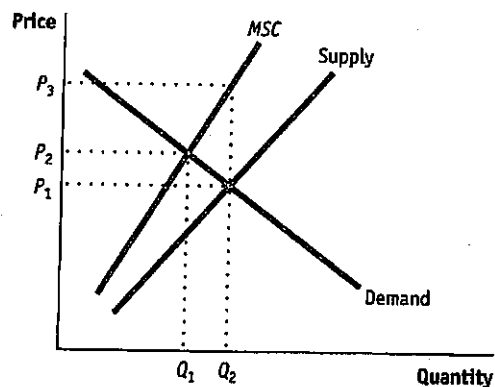
42. If Firm #1 decides to advertise, which of the following is true for Firm #2?
- A. Its dominant strategy is to advertise.
 - B. Its dominant strategy is not to advertise.
 - C. It does not have a dominant strategy.
 - D. It may choose either to advertise or not to advertise.
 - E. It will always choose not to advertise.
43. Collusion by the two firms will result in which of the following outcomes?
- A. Firm #1 advertises; Firm #2 does not.
 - B. Firm #2 advertises; Firm #1 does not.
 - C. Both firms advertise.
 - D. Neither firm advertises.
 - E. It is impossible to determine what each firm will do.
44. Which of the following is a characteristic of monopolistically competitive firms?
- A. barriers to entry
 - B. long-run economic profits
 - C. standardized products
 - D. a large number of buyers and sellers
 - E. perfectly elastic demand curves
45. Which of the following is most likely to be true in the long run for a monopolistically competitive firm?
- A. $P = ATC = MR = MC$
 - B. $P = MR = MC > ATC$
 - C. $P > MR = MC = ATC$
 - D. $P = ATC > MC = MR$
 - E. $P > ATC > MC = MR$

46. The individual producer's demand for labor curve is the same as which curve when the product market is imperfectly competitive?
- marginal factor cost (MFC)
 - marginal revenue (MR)
 - marginal product (MP)
 - marginal revenue product (MRP)
 - value of the marginal product (VMP)
47. Which of the following will decrease the demand for bank tellers?
- an increase in the price of bank services
 - a technological advance that makes bank tellers more productive
 - an increase in the number of teller windows available for customers
 - an increase in the number of trained bank tellers
 - an increase in the popularity and availability of online banking
48. Which of the following is true of an individual's labor supply curve? It has a
- positive slope.
 - negative slope.
 - negative slope at low wage levels and a positive slope at higher wage levels.
 - positive slope at low wage levels and a negative slope at higher wage levels.
 - different slope depending on the demand for labor.
49. A monopsony employer hires labor up to the point at which marginal factor cost equals
- the price of the product.
 - marginal revenue.
 - marginal product.
 - the value of marginal product.
 - marginal revenue product.
50. Which of the following would lead to an increase in the supply of labor?
- an increase in career opportunities for women
 - a decrease in population
 - an increase in wealth
 - a shift in the population from urban to rural areas
 - an increase in worker productivity
51. Suppose a new regulation requires all auto mechanics to pass a test and pay a fee to obtain a license before they can work. How will this new policy affect the supply of auto mechanics, the equilibrium wage in the market for auto mechanics, and the price of auto repairs?

Supply of Auto Mechanics	Equilibrium Wage	Price of Auto Repairs
A. Decrease	Increase	Increase
B. Decrease	Decrease	Increase
C. Increase	Increase	Increase
D. Decrease	Decrease	Increase
E. Increase	Decrease	Decrease

52. If the marginal product of capital and labor are both 100 while the wage is \$10 and the rental rate is \$12, which of the following is true? Assume the firm is currently producing the desired level of output. The firm
- is maximizing profits.
 - is minimizing costs.
 - should hire more capital and less labor.
 - should hire more labor and less capital.
 - should hire only labor.
53. Which of the following is the best example of a negative externality?
- Your neighbors allow you free access to their swimming pool.
 - Your roommate provides a brand new TV for your living room.
 - The government raises your income tax.
 - You catch the flu from the student who sits next to you in math class.
 - Free riders receive benefits from goods they did not help pay for.
54. Which of the follow is the best example of a good that is excludable?
- fire protection
 - pollution
 - a cable TV broadcast
 - clean water in a river
 - a public sewer system

Refer to the graph provided for questions 55, 56, and 57. The graph shows the market for a good that generates external costs.



55. At the market equilibrium, the marginal external cost of producing this good is
- P_3 .
 - P_2 .
 - P_1 .
 - $(P_3 - P_1)$.
 - $(P_2 - P_1)$.
56. Without government action, the market will produce _____, which is _____ the efficient level of production.
- Q_1 , greater than
 - Q_1 , less than
 - Q_2 , greater than
 - Q_2 , less than
 - Q_2 , equal to

57. The government can move production to the optimal level by instituting a Pigouvian _____ equal to _____.
- A. subsidy, marginal external cost
 - B. subsidy, P_2
 - C. tax, P_2
 - D. tax, P_1
 - E. tax, marginal external cost
58. Which of the following is the best example of a good that is rival in consumption?
- A. a cable television broadcast
 - B. national defense
 - C. clean water in a river
 - D. a fireworks display
 - E. an apple
59. Because of the free-rider effect, private markets produce
- A. the allocatively efficient quantity of output.
 - B. too much of a public good, requiring the government to place a tax on the good.
 - C. too little of a public good, requiring the government to provide the good.
 - D. too much of a public good, requiring the government to place a quota on the production of the good.
 - E. too little of a public good, requiring the government to place a tax on the good.
60. The marginal productivity theory of income distribution says that marginal productivity at the economy's equilibrium determines which of the following?
- A. how much each worker is worth
 - B. the division of income among the factors of production
 - C. whether or not there is discrimination in labor markets
 - D. the price level in the economy
 - E. the deadweight loss due to imperfect competition in factor markets

Place a "✓" by the questions you answered correctly.

I. Basic Economic Concepts						Number correct
1 _____	2 _____	3 _____	4 _____	5 _____	6 _____	<input type="text"/>

II A. Supply and Demand						
7 _____	8 _____	9 _____	10 _____	11 _____	12 _____	<input type="text"/>
13 _____	14 _____	15 _____	16 _____	17 _____		

II B. Theory of Consumer Choice			
18 _____	19 _____	20 _____	<input type="text"/>

II C. Production and Costs					
21 _____	22 _____	23 _____	24 _____	25 _____	<input type="text"/>

II D. Firm Behavior and Market Structure						
26 _____	27 _____	28 _____	29 _____	30 _____	31 _____	<input type="text"/>
32 _____	33 _____	34 _____	35 _____	36 _____	37 _____	
38 _____	39 _____	40 _____	41 _____	42 _____	43 _____	
44 _____	45 _____					

III. Factor Markets						
46 _____	47 _____	48 _____	49 _____	50 _____	51 _____	<input type="text"/>
52 _____						

IV. Market Failure and the Role of Government						
53 _____	54 _____	55 _____	56 _____	57 _____	58 _____	<input type="text"/>
59 _____	60 _____					

Total number correct →

Use Your Scores on the Diagnostic Test to Determine How to Prepare for the AP Exam

Start by determining the percent of the questions that you answered correctly. Your total number correct divided by 60 is the percent of questions you answered correctly:

$$\boxed{} \div 60 = \boxed{}$$

Total # correct Total % correct

To get an idea of how much you will need to study for your AP exam, you can compare your performance to students who took the most recently released AP Microeconomics exam. Of the students who scored a "3" on the AP Microeconomics exam (the minimum score to receive college credit), 80 percent scored between 31 and 60 on the multiple-choice section. Sixty-seven percent of those scoring a "3" scored between 31 and 36 on the multiple-choice section. So if your score was below 50 percent on this diagnostic test, you need to allocate additional time to study for the AP exam, beyond the review time that all students need to spend in order to do well on the exam. If you scored above 50 percent, you should still plan to spend time studying the sections for which you most need to improve your performance, as well as taking time to review all of the sections in the week leading up to the exam.

Next, determine how to allocate your study time to each section of material by evaluating your score in each section. First, find the percent of the questions you answered correctly in each section by dividing the number you answered correctly by the number of questions in the section. Spend more time studying the material in those sections for which the percent you answered correctly is less than your total percent correct and less time studying the sections for which the percent you answered correctly is greater than your total percent correct. Next, look at how much each section is weighted on the AP exam. Spend more time studying those sections that are given a higher weight.

Section 1:

$$\boxed{} \div 6 = \boxed{} \text{ 12\%}$$

Sec. 1 # correct

Section 2B:

$$\boxed{} \div 3 = \boxed{} \text{ 5\%}$$

Sec. 2B # correct

Section 2D:

$$\boxed{} \div 20 = \boxed{} \text{ 33\%}$$

Sec. 2D # correct

Section 4:

$$\boxed{} \div 8 = \boxed{} \text{ 13\%}$$

Sec. 4 # correct

Section 2A:

$$\boxed{} \div 12 = \boxed{} \text{ 17\%}$$

Sec. 2A # correct

Section 2C:

$$\boxed{} \div 5 = \boxed{} \text{ 8\%}$$

Sec. 2C # correct

Section 3:

$$\boxed{} \div 7 = \boxed{} \text{ 12\%}$$

Sec. 3 # correct