

Sample Questions

Use the following to answer question 1.

Table 12.10

		Player 2		
		Rock	Paper	Scissors
Player 1	Rock	0, 0	-1, 1	1, -1
	Paper	1, 0	0, 0	-1, 1
	Scissors	-1, 1	1, -1	0, 0

1. (Table 12.10) The table shows the payoffs from the game rock-paper-scissors. Which of the following statements is (are) TRUE?
- I. There is no pure-strategy Nash equilibrium.
 - II. The Nash equilibria are (rock, rock), (paper, paper), and (scissors, scissors).
 - III. The mixed-strategy Nash equilibrium is for each player to randomly select each strategy one-third of the time.
- A) II and III
 B) I and III
 C) III
 D) I and II

Use the following to answer question 2.

Table 12.1, payoffs are Randy's, Todd's.

		Todd	
		Left	Right
Randy	Top	\$42, \$40	\$33, \$28
	Bottom	\$33, \$67	\$27, \$18

2. (Table 12.1) Randy and Todd are playing a simultaneous game. Randy's payoff is listed first. What are Randy's and Todd's dominant strategies?
- A) Randy's dominant strategy is Bottom and Todd's dominant strategy is Left.
 - B) Randy's dominant strategy is Top and Todd's dominant strategy is Left.
 - C) Randy's dominant strategy is Bottom and Todd's dominant strategy is Right.
 - D) Randy's dominant strategy is Top and Todd's dominant strategy is Right.
3. Which of the following statements is (are) TRUE?
- I. A Nash equilibrium requires that each player have a dominant strategy.
 - II. A Nash equilibrium requires that each player have a dominated strategy.
 - III. A game can have more than one Nash equilibrium.
- A) I and II
 - B) I, II, and III
 - C) I and III
 - D) III

Use the following to answer question 4.

Table 12.5

		<i>ESPN Magazine</i> Cover Story	
		Brett Favre Comes Out of Retirement	Tim Tebow's 45-Point 4th-Quarter Comeback
<i>Sports Illustrated</i> Cover Story	Brett Favre Comes Out of Retirement	2.8, 1.4	2.5, 1.9
	Tim Tebow's 45-Point 4th-Quarter Comeback	3, 1.7	2.7, 1.6

4. (Table 12.5) Payoffs represent profits in millions of dollars. Sports Illustrated's payoffs are listed first. What is ESPN's dominant strategy?
- A) none
 - B) run the Brett Favre cover story
 - C) run the Tim Tebow cover story
 - D) run either cover story

Use the following to answer question 5.

Table 12.16

		Firm B	
		High Price	Low Price
Firm A	High Price	20, 20	10, 30
	Low Price	30, 10	15, 15

5. (Table 12.16) In the table, the payoffs represent profits measured in thousands of dollars. Firm A's payoff is listed first. Suppose that Firm A and Firm B are playing an infinitely repeated game. In period 6, Firm B decides to no longer cooperate with Firm A. If Firm A is using a grim trigger strategy, Firm A will choose:
- A) a low price in period 7 and all future periods.
 - B) a low price in period 7 and a high price in all future periods.
 - C) to set price below marginal cost and drive Firm B out of the market.
 - D) to maintain a high price in all future periods.

Use the following to answer question 6.

Table 12.6

		Fruit of the Loom T-Shirt Price		
		\$8	\$6	\$4
Hanes T-Shirt Price	\$8	20, 20	15, 22	10, 19
	\$6	22, 15	17, 17	16, 15
	\$4	19, 10	15, 16	14, 14

6. (Table 12.6) Payoffs represent profits in thousands, with Hanes listed first. What is the Nash equilibrium?
- A) (20 , 20)
 - B) (17 , 17)
 - C) (14 , 14)
 - D) (19 , 10) or (10 , 19)
7. Davey has the opportunity to buy an investment that pays \$500 at the end of each of the next two years. If interest rates are 6.5%, what is the maximum price that Davey should pay for this investment?
- A) \$910.31
 - B) \$889.23
 - C) \$777.20
 - D) \$686.40

Use the following to answer question 8.

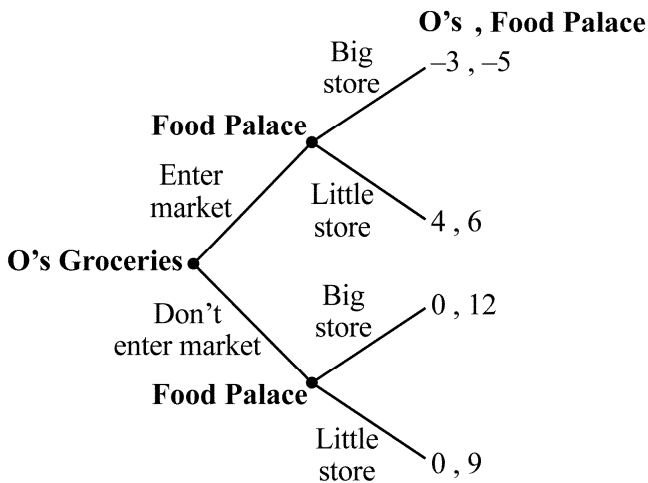
Table 12.3

		Imperial	
		Advertise	Don't Advertise
Cape North	Advertise	120 , 120	180 , 75
	Don't Advertise	75 , 180	154 , 154

8. (Table 12.3) The payoffs represent profits, with Cape North's payoff listed first. In Nash equilibrium, Cape North will earn a profit of _____ and Imperial will earn a profit of _____.
- A) \$154; \$154
 - B) \$120; \$120
 - C) \$75; \$180
 - D) \$75; \$75

Use the following to answer question 9.

Figure 12.8



9. (Figure 12.8) O's payoffs are listed first. Which of the following is an example of a noncredible threat?
- A) O's Groceries tells the Food Palace that it is committed to entering the market.
 - B) Food Palace tells O's Groceries that it will build a large store whether or not O's Groceries enters the market.
 - C) Food Palace tells O's Groceries that it will build a small store if O's Groceries enters the market.
 - D) O's Groceries tells the Food Palace that it will not enter the market.

Use the following to answer question 10.

Table 12.18

		Motor City Art School	
		Financial Aid	No Aid
Detroit Art School	Financial Aid	120, 120	240, 60
	No Aid	240, 60	180, 180

10. (Table 12.18) The payoffs represent profits measured in thousands of dollars. In this infinitely repeated game, the two schools agree to cooperate and not offer financial aid. Each school follows a grim trigger strategy. At what value of d is the Motor City Art School indifferent between upholding and cheating on the agreement?
- A) 0.5
 - B) 0.7
 - C) 0.75
 - D) 0.9
11. Suppose that Ben and Tim are playing a flag game, a finitely repeated game. The game starts with 7 flags in the ground and then the players take alternate turns removing the flags. A player must remove either 1, 2, or 3 flags per turn. The player who takes the last flag out of the ground, regardless of whether it is by itself or in a group of 2 or 3, wins the game. Assume that Ben decides first on how many flags to remove. How many flags should Ben remove on his first turn to guarantee that he will win the game? Use backward induction to help answer this question.
- A) 1
 - B) 2
 - C) 3
 - D) either 1 or 2
12. Suppose that a bond with a \$1,000 face value matures in one year and pays a 10% coupon rate. It is selling for \$1,025. What interest rate would make a person indifferent between the selling price of \$1,025 and the bond payment (face value and coupon) one year from now?
- A) 9.8%
 - B) 7.3%
 - C) 11.1%
 - D) 10.2%

Answer Key - F21-Sample

1. B
2. B
3. D
4. A
5. A
6. B
7. A
8. B
9. B
10. A
11. C
12. B