

Review For Exam 2

Exam 2 covers Chapter 5, Chapter 6, Chapter 7, Chapter 8, Chapter 9, and Chapter 10.

Review For Exam 2

There are 6 short answers, one longer answer, and 2 long answers. You only need to complete one long answer.

Chapter 5

- best-response curve
- continuous strategy
- refinement
- rationalizability

Chapter 6

- credibility
- information set
- off-equilibrium path
- off-equilibrium subgame
- subgame
- subgame-perfect equilibrium

Chapter 7

- expected payoff
- opponent's indifference property

Chapter 8

- Adverse selection
- babbling equilibrium
- Cheap talk equilibrium
- incentive-compatibility condition (constraint)
- moral hazard
- negatively correlated

Chapter 8

- Negatively correlated
- Partially revealing equilibrium
- Participation condition
- Pooling equilibrium
- Positively correlated
- Screening

Chapter 8

- Self-selection
- Semiseparating equilibrium
- Separating equilibrium
- Signal
- Signal jamming
- type

Chapter 9

- deterrence
- commitment
- compellence
- doomsday device
- irreversible action
- observable action

Chapter 9

- promise/threat
- rational irrationality
- reputation
- response rule
- salami tactics
- strategic moves

Chapter 10

- compound interest
- contingent strategy
- discount factor
- effective rate of return
- grim strategy
- infinite horizon

Chapter 10

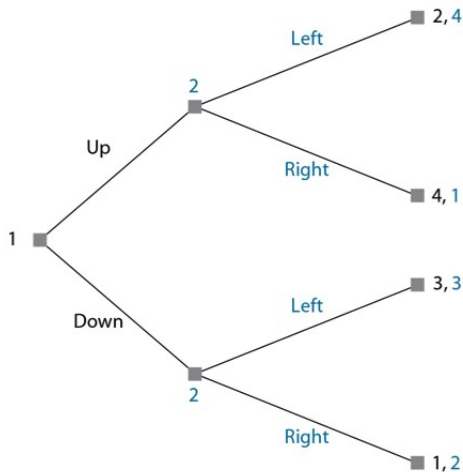
- trigger strategy
- tit-for-tat (TFT)
- repeated play
- punishment
- present value (PV)
- penalty
- leadership

Combining Sequential and Simultaneous Moves

For more practice on Combining Sequential and Simultaneous Moves, try S3, S8, S10.

Combining Sequential and Simultaneous Moves

Redraw the following game as a game matrix.



Combining Sequential and Simultaneous Moves

		Player 2			
		LL	LR	RL	RR
Player 1	U	2, <u>4</u>	<u>2</u> , 4	<u>4</u> , 1	<u>4</u> , 1
	D	<u>3</u> , <u>3</u>	1, 2	3, <u>3</u>	1, 2

Mixed Strategy

Find the mixed strategy equilibrium.

		COLIN	
		Left	Right
ROWENA	Up	1, 16	4, 6
	Down	2, 20	3, 40



Mixed Strategy

$$p = 2/3, q = 1/2$$

		COLIN	
		Left	Right
ROWENA	Up	1, 16	4, 6
	Down	2, 20	3, 40

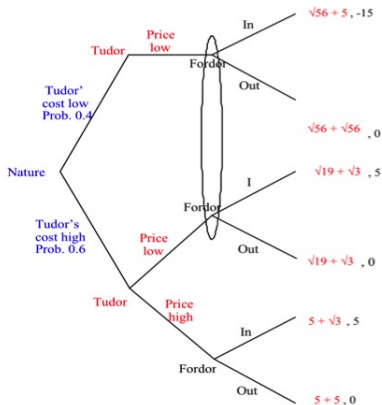


Mixed Strategy

For more practice on Mixed Strategy, try S8, S9, S10, S13.

Uncertainty and Information

Draw the following using a game matrix. Is the equilibrium pooling or separating?



Uncertainty and Information

The unique Nash equilibrium is (Bluff, Conditional).

		Fordor	
		Regardless (II)	Conditional (OI)
Tudor	Bluff (LL)	$(\sqrt{56} + 5) \cdot 0.4 + (\sqrt{19} + \sqrt{3}) \cdot 0.6 =$ $8.6479, (-15) \cdot 0.4 + 5 \cdot 0.6 = -3$	$2\sqrt{56} \cdot 0.4 + (\sqrt{19} + 5) \cdot 0.6 =$ $11.6020, 0$
	Honest (LH)	$(\sqrt{56} + 5) \cdot 0.4 + (5 + \sqrt{3}) \cdot 0.6 = 9.0326,$ $(-15) \cdot 0.4 + 5 \cdot 0.6 = -3$	$2\sqrt{56} \cdot 0.4 + (5 + \sqrt{3}) \cdot 0.6 =$ $10.0259, 0$

Uncertainty and Information

For more practice on Uncertainty, try S7, S8, S9.

Strategic Moves

Can any player benefit from using a strategic move?

Strategic Moves

(i)

		COLUMN	
		Left	Right
ROW	Up	0,0	2,1
	Down	1,2	0,0

Strategic Moves

If Row commits to Up, he ensures himself a payoff of 2.
Similarly, if Column commits to Left, he ensures himself a payoff of 2.

Strategic Moves

(ii)

		COLUMN	
		Left	Right
ROW	Up	4, 3	3, 4
	Down	2, 1	1, 2

Strategic Moves

Row can achieve his best payoff of 4 by using the threat Down if Right.

Strategic Moves

(iii)

		COLUMN	
		Left	Right
ROW	Up	4,1	2,2
	Down	3,3	1,4

Strategic Moves

Either player can make a promise that moves the game to (Down, Left) and payoffs of (3, 3). Row can promise Down if Left; Column can promise Left if Down.

Strategic Moves

For more practice on Strategic Moves, try S3, S4.

Repeated Games

Suppose this game is played for five years. What is the subgame perfect equilibrium?

		Clearsmooth	
		Advertise	Don't
Glassworks	Advertise	2, 2	7, 0
	Don't	0, 7	5, 5

Repeated Games

- Now suppose that the game is repeated infinitely and each player plays grim trigger.
- The interest rate is 20 percent per round. For either firm the benefit of playing advertising in a given round is $7 - 5 = 2$, while in every subsequent round the cost is $5 - 2 = 3$.
- The present value of the cost incurred in all future rounds is $3/(0.2) = 15$.
- Since $2 < 15$, the benefits of advertising in any given round do not outweigh the present value of the costs in all future rounds, so neither firm would want to advertise.

Repeated Games

For more practice on Repeated Games, try S2, S3, S5, S6.