

# Introduction to Game Theory

Mathematics · Practice Test · 18 Questions

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**1. Who is often considered one of the founding fathers of modern game theory?**

- A) Isaac Newton
- B) John von Neumann
- C) Albert Einstein
- D) Charles Darwin

**2. In game theory, what term describes a situation where no player can benefit by changing their strategy while others keep theirs unchanged?**

- A) Nash Equilibrium
- B) Zero-sum result
- C) Optimal state
- D) Fair play

**3. What is the name of the famous game theory scenario where two suspects must decide whether to betray each other?**

- A) The Chess Match
- B) The Prisoner's Dilemma
- C) The Ultimatum Game
- D) The Coin Toss

**4. What type of game is defined by the rule that one person's gain is exactly equal to another person's loss?**

- A) Cooperative game
- B) Variable-sum game
- C) Zero-sum game
- D) Non-zero-sum game

**5. Game theory is primarily a branch of which academic field?**

- A) Mathematics
- B) Biology
- C) History
- D) Literature

**6. In a 'cooperative game,' players are able to do what?**

- A) Play alone
- B) Form coalitions
- C) Ignore opponents
- D) Lose intentionally

**7. Which board game is frequently used by researchers to study game theory and strategic move planning?**

- A) Chess
- B) Snakes and Ladders
- C) Bingo
- D) Tiddlywinks

**8. The study of game theory is most commonly applied in which professional field?**

- A) Architecture
- B) Economics
- C) Cooking
- D) Gardening

**9. What does a 'payoff' represent in game theory?**

- A) The cost of playing
- B) The final outcome or reward
- C) The time spent playing
- D) The number of players

**10. What is a 'player' in the context of game theory?**

- A) An actor in a movie
- B) A participant making decisions
- C) A person who plays sports
- D) A mechanical robot

**11. Game theory models often assume that players act in a way that is:**

- A) Random
- B) Rational
- C) Emotional
- D) Forgetful

**12. What type of game involves players making choices at the exact same time without knowing the other's choice?**

- A) Sequential game
- B) Simultaneous game
- C) Randomized game
- D) Endless game

**13. The concept of 'information' in game theory refers to:**

- A) The size of the board
- B) What a player knows about others
- C) The speed of the game
- D) The cost of the game

**14. Which mathematician won a Nobel Prize for his work on the Nash Equilibrium?**

- A) John Nash
- B) Alan Turing
- C) Nikola Tesla
- D) Stephen Hawking

**15. In game theory, a 'strategy' is best defined as:**

- A) A lucky guess
- B) A complete plan of action
- C) A forfeit
- D) A way to cheat

**16. A 'non-zero-sum game' is one where:**

- A) Total outcomes can be positive or negative
- B) The sum is always zero
- C) No one wins
- D) The game has no rules

**17. Which of these is a necessary component for a game theory model?**

- A) A scoreboard
- B) A set of players and strategies
- C) A physical ball
- D) A referee

**18. Game theory helps scientists understand behavior in:**

- A) Biological evolution
- B) Weather patterns
- C) Writing poetry
- D) Painting portraits