



## Game 24: Order Up 21!

### Objective

After drawing four cards or rolling the four dice, players build an equation using all four numbers and applying the order of operations (parentheses, exponents, multiplication, division, addition, and subtraction). The objective is to build an equation that totals twenty-one. After each round, a player's or team's score is determined by how far away their total is from twenty-one. After ten rounds, the player or team with the lowest score is the winner.

### Materials

- playing cards (face cards and Jokers removed; Aces remain and represent the value of 1), 1 deck per pair of players  
or
- Numeral Cards 0–10 (REPRODUCIBLE B), 1 deck per player, pair, or group of players  
or
- dice (2 labeled 0–5, 2 labeled 5–10), 2 of each per player, pair, or group of players
- *Order Up 21!* Recording Sheet (REPRODUCIBLE 28), 1 per player or pair of players

### Players

1, 2, or 4

### Directions

1. If playing in pairs, decide who is Player 1 and who is Player 2. If playing in teams, decide who is on Team 1 and who is on Team 2.
2. Roll all four dice or draw four cards.

3. Each player or team builds an equation using the four numbers and following the rules for building equations. Players write the equation on their recording sheet.
4. After each player or team has built an equation, determine the scores. The score for each round is how far away the total is from twenty-one. Players record their scores on the recording sheet.
5. Play ten rounds. After ten rounds, total your scores. The player or team with the lowest score is the winner.

#### A Deck of Cards

For the purpose of this game, a deck of cards is four of each number Ace (1)–10. If using a deck of playing cards, the 0 is not available.

#### Game Rules for Building Equations

- Players may use any combination of the four operations (addition, subtraction, multiplication, division).
- The numbers may be used in any order, but may only be used once. If a number is drawn/rolled twice, the number must be used twice in the equation.
- Remember to use parentheses.
- Numbers may be used as exponents.
- Numbers may also be used to form fractions equivalent to whole numbers.
- Equations must be accurate mathematically.

#### Scoring

Points are determined by how far away the total of the equation is from 21. A score of 0 point means the player got exactly 21. A score of 1 point means the player got either 20 or 22. The goal is to have the lowest score.

