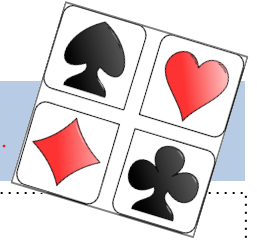


Operations Euchre



Strands:

Number & Quantity	X
Algebra	
Functions	
Geometry	
Statistics & Probability	

In this card game for two person teams, combine numbers on your cards to hit the target or come closer than opposing teams.

Set-Up:

- Group into two player teams. Teammates sit opposite each other.
- Each team chooses a different color sheet of paper. During the game, play your cards on your team's chosen color of paper.
- Ace = 1, Jack = 11, Queen = 12, King = 13. All other cards represent the number on the card.
- Player wearing the most black deals first.

Object of the Game: Combine 2, 3, or 4 numbers using operations of addition, subtraction, multiplication, or division to reach a target number.

Helpful Vocabulary:

Trick: Players each play one card in succession, with one player winning the round or set of cards, known as the "trick." The winner of the trick leads the next trick. In *Operations Euchre*, a team wins the "trick."

Hand: The cards that you are dealt.

Playing the Game:

1. Dealer: Shuffle the deck. Deal each player 7 cards.
2. Flip up the top card of the remaining cards in the deck. The flipped up card is the target number for the trick.
3. The player to the left of the dealer plays first unless the previous trick was won using 3 cards (see Helpful Hint). Play moves to the left.
4.
 - a. In order, and if possible, play a card onto your team's colorful playing surface so that when combined with your teammate's card and some operation (+, -, x, or ÷), the result is the target number. State the number sentence you have so far.
 - b. A team wins the trick if they hit the target exactly. In the case of a tie, tied teams split the cards and count the full trick in their score.
 - c. A trick can be won in 2 cards, 3 cards, or 4 cards. If no team wins the trick in 2 cards, then a third card is played by each team, in order. If no team wins the trick in 3 cards, then a fourth card is played by each team, in order. Teams can reorganize cards and use different operations each time another card is played.
5. Repeat steps 2 through 4 until all cards for the hand are played.
6. Record the score for each team, 1 point per trick. The highest score wins the round. Teams can tie.
7. Dealer moves to the left. Repeat steps 1 through 7 to complete at least 3 rounds.

To Win: After 3 rounds, the team who won the most rounds wins the game.

Think About It:

1. Suppose your teammate played a 6 and the target is 2. What cards can you play to hit the target? Explain.
2. Suppose your team has played a Queen = 12 and a 4, and the target is 5. What cards, if any, can you play to hit the target?
3. Which cards give you the most flexibility in hitting the target? Why do you think so?
4. Which cards are hard to play to hit the target? Why do you think so?
5. What strategies do you want to remember for the next time you play this game?

Materials Needed:

- Deck of playing cards, 1 deck per 6 players
- Sheets of colorful paper, different color for each team
- Scrap paper
- Pencil

Where:

Outside	
Inside	X
On-line	
On-site	



Variations:

Suit Switch: The first player for each team, in each trick, plays a card as normal. Subsequent cards are played with these rules. Combine cards using the following operations:

- Diamonds: +,
- Clubs: -, player chooses which number to subtract from which,
- Hearts: \times , and
- Spades: \div , player chooses which number to divide by which.

Black & Red: Black cards are positive numbers. Red cards are negative numbers. Play the game as normal. This variation can also be played with Suit Switch.

Joker on Deck: Include both Jokers. Jokers allow you to do one of the following:

1. Trade your Joker for the top card of the deck. (Remove Joker from play until the next hand.)
2. Alter a card already played by your team, as follows:
 - a. Take the square root of a number.
 - b. Square a number.
 - c. Use the factorial of a number.
 - d. Concatenate two cards played by your team. For example, if your team has played an Ace = 1 and a 3, put the two cards together to make 13 or 31.
3. Decide with your teammate how to use the Joker once you play it.

Helpful Hint:

- If a team hits the target number with the third card played, the other half of each team has an extra card. The first player with an extra card leads the trick until cards even out again.