

Consecutive Capture

An integer game for 2-4 players

Objectives: use of the positive and negative numberline, understanding of consecutive integers, some playing strategy.

Materials: deck of cards, Jokers included.

Set up: deal each player 3 cards. Red cards are negative, black cards are positive. Jack=11, Queen=12, King=13, Ace=1 or 14. Joker=0.

Gameplay: Players take turn playing cards onto the Line. Cards go in order as if on a number line. After playing a card, a player draws a card to replace it. If a player makes 3 or more consecutive integers, they pick up the all the consecutive cards. The player with the most cards picked up at the end wins.

Example:

A									6	5				J		2		4	5			8
														k								

If a player plays the 7 , they'll pick up -7, -6, -5. If a player plays A  as +1, they'll pick up 0, 1, 2. But if they play a black 3, they'll pick up 2, 3, 4, 5.

It's possible for a spot to have up a 3 you only pick up the t



, like the 3  and the 3 . In the case that you pick

Zero Rummy

An integer game for 2-4 players.

Objectives: adding signed numbers with an emphasis on ways to make zero.

Materials: deck of cards, Jokers removed.

Set up: deal seven cards to each player. Flip over the top card of the deck as the first discard. Red cards are negative, black cards are positive. Jack=11, Queen=12, King=13, Ace=1.

Game play: The game has two goals: to go out, having played all your cards, and to score the most points by playing many cards and in big combos.

On each player's turn:

- they choose to draw a card from the deck or take the top discarded card.
- they may play one set of cards that add to zero. But sometimes you can't, and sometimes you choose not to so you can build up to a bigger combo. You may not play two or more zero sets on the same turn.
- At the end of their turn, they must discard a card.

The one special move is to pick up a card from deeper down in the discard pile. Then you also have to pick up all the cards above it, and you must play a set that includes the deepest card picked up. The round ends when a player has no cards at the end of their turn.

A zero set can not have another smaller zero set in it. For example, if you have $3\heartsuit + 3\spadesuit + 5\heartsuit + 6\clubsuit + J\clubsuit$ you can separate it into $3\heartsuit + 3\spadesuit$ and $5\heartsuit + 6\clubsuit + J\clubsuit$. You can only play one of them on one turn.

Scoring: Players score 2 points for a zero pair, 4 points for a three card zero set, and 8 points for a four or more card set. Players subtract one point for each card left in their hand.

Examples: $5\clubsuit + 5\spadesuit$, 2 points. $5\heartsuit + 6\clubsuit + J\clubsuit$, 4 points. $8\spadesuit + 4\spadesuit + K\heartsuit + 2\heartsuit + 3\spadesuit$, 8 points.

Variations:

- You can play gin zero rummy, where players do not lay down sets along the way, but have to draw and discard until they have a full hand that equals zero.
- Play with no zero pairs.
- Play where you need at least 10 points to go out. (Encourages discard scooping.)

Close to Zero

Any number of players or teams.

Adapted from TERC's *Investigations in Number, Data and Space*.

Objectives: adding positive to negative, near double-digit subtraction.

Materials: Deck of Cards, face cards and tens removed. Optional: leave Jacks in for zeros.

Gameplay: Deal 6 cards to each player. Using those cards form a two digit negative number and a two digit positive number. Add them to get your score for the round. Draw four new cards for the next round.

Notice that your score from one round can cancel out your score from before.

If you run out of cards, shuffle in the used cards. A game is four rounds. The player with total score closest to zero is the winner. In case of a tie, play one more round.

Variation: Only red cards can be negative and black cards positive. If you only have one card of a color it must be your number. If you have zero cards of a color, that number is zero. The other number must still be 2 digits.

$-$		
$+$		



of players. Quite nice to play with teams.

Ordered numbers, order of operations, removed. Red cards are negative and calculators. Optional: leave face cards in: middle of the table. Any of the numbers can be the goal being to get 24 or -24.

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Players write down as many combos as they see for two minutes. (Please adjust time for your players. Older players can have as little one minute.)

Give your list to the person next to you to check. One point for each correctly written combo. Order of operations are in effect.

Example: Deal +2, -4, -5, 6, 8, -8. Some possible combinations: $-4 \times -8 - 8$, $-4 \times 8 - -8$, -4×6 , $4 \times 8 \div 2 - -8$, $-5 \times -4 + 8 \div 2$, $(-5 + 2) \times 8 \dots$

Variations:

- can reuse numbers. (easier)
- deal 5 cards. (harder)
- only score combinations no one else came up with. (harder – especially because of commutativity!; go by same)
- goal is just to come up with one combo. (easier)
- cooperatively play, goal to find all of them.