

Notes for *The Zero Game*

Level: Grades 1-3

Recommended # of Players: 2-4

Materials: 5 chips for each player; 1 place marker; deck of *Zero Game* cards consisting of 30 subtraction cards (1-10) and 5 addition cards (2, 4, 6, 8, 10) (Note: standard playing cards can also be used, making red subtraction and black addition.)

Math Skills: addition and subtraction of numbers 1-10; number line

Mathematical benefits:

The Zero Game is beneficial for children who are developing fluency adding and subtracting small numbers (1-10) from 1- and 2-digit numbers. The game board presents children with a type of number line, giving them a visual assist if they cannot add or subtract mentally. The game board consists of 4 lines of numbers (organized by tens), one of the challenges for children is to recognize that when the marker reaches the end of a line of tens, it has to be moved to the next line - much like borrowing or carrying.

As the marker gets closer to zero, children have the opportunity to reason about which numbers would take them below zero (causing them to lose a chip) and which number they would need to play in order to land directly on zero (thus collecting extra chips). Children can also develop strategies such as using their large numbers early in the game (when the marker is closer to 30), playing a card that will place the marker very close to zero for the next player, and hoarding their addition cards to use when the marker gets close to zero.

The **Z**ero Game

For two to four players

Materials: 5 chips for each player; 1 place marker; 30 subtraction cards (1-10) and 5 addition cards (2, 4, 6, 8, 10)

Objective: To have the most chips at the end of the game.

To Play:

1. Each player takes five chips.
2. Players decide who will be the dealer and who will go first.
3. The dealer shuffles the cards from the deck and deals three cards to each player. The remaining cards are placed face down. This is the DRAW pile.
4. The marker is placed on **30**.
5. The first player puts one of his or her cards face up next to the DRAW pile. This is the STACK. The player subtracts the number of the card played from 30, announces the new number, and moves the marker to the new number. The player then draws a card from the DRAW pile to replace the card that was played.
6. Players take turns placing one card on the STACK, subtracting the number from the number that the marker is on, and announcing the new number. Players move the marker to the new number and draw a new card from the DRAW pile to replace the played card.
7. Turns continue until the number **0** is reached.
8. If a player moves the marker below **0**, he or she must put one of his or her chips in the center (called the Chip Kitty). The cards are shuffled and a new round is started.
9. If a player lands on exactly zero, he or she gets to collect all the chips in the Chip Kitty *and* one chip from each player. The cards are shuffled and a new round is started.
10. The game is over when one player runs out of chips. The winner is the person with the most chips.



The **Z**ero Game

0	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30
	31	32	33	34	35	36	37	38	39	40

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<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-2</u>
<u>-2</u>	<u>-2</u>	<u>-3</u>	<u>-3</u>
<u>-3</u>	<u>-4</u>	<u>-4</u>	<u>-4</u>
<u>-5</u>	<u>-5</u>	<u>-5</u>	<u>-6</u>
<u>-6</u>	<u>-6</u>	<u>-7</u>	<u>-7</u>

<u>-7</u>	<u>-8</u>	<u>-8</u>	<u>-8</u>
<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-10</u>
<u>-10</u>	<u>-10</u>	<u>+2</u>	<u>+4</u>
<u>+6</u>	<u>+8</u>	<u>+10</u>	