

# The Counting Game: A Fun Game for Parents and Children

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**D**oing mathematics along with your children can provide parents and guardians with a better understanding of how mathematics is learned and applied. Yet the mathematics activities must be chosen carefully to make the best use of the limited time we have with parents, and to have the greatest impact. Activities should be multi-graded, examples of our best mathematics teaching, brief, AND STIMULATING!

The Counting Game (also classically known as NIM) from *Math at Home*, published by the Sonoma California County Office of Education, is a great mathematics activity to share with parents of all age students. This game is simple enough for 4-year-olds to play, yet mathematically sophisticated with limitless variations to challenge older students and even adults. It has basic skills, number sense, and problem solving—all in the guise of parents and their children having fun while doing mathematics together!

## The Counting Game: A fun anytime activity

The Counting Game is so simple it can be played by young children, yet so mathematically intriguing it can challenge older children as well. It's a perfect "anywhere, anytime" game. Anyone who can count to 20 can play it. Here's how it goes:

1. Two people take turns counting aloud. The first person starts at ONE and the game is over when the counting reaches TWENTY.
2. Each player counts aloud by saying one, two, or three numbers in order from where the other player stopped counting.
3. Whoever says the number TWENTY, by itself or in a group of numbers, is the winner. For example, in this game:

Player One says...	Player Two says...
1, 2, 3 .....	4
5, 6 .....	7, 8
9, 10, 11 .....	12

Player One says...	Player Two says...
13, 14 .....	15, 16
17 .....	18, 19, <b>20!</b>

...and Player Two wins the game.

At first glance, the game seems like a simple way for young counters to practice—but there's actually more to it than that. As you and your child play the game, you'll discover number patterns and start to see that there's a strategy for winning. Here are some winning strategy clues for the Counting Game:

- Let the other player go first (it's better to go second). There is a "second player" strategy.
- Listen for the multiples of four—4, 8, 12, and 16, 20—and, whenever possible, have your turn end with one of them.
- If you must go first or if you can't count to a multiple of four, count a small number and try to reach a multiple of four on your next turn.

You can play four or five rounds of the Counting Game quickly—so play it often to give your child a chance to figure out the winning strategy. Later on, try modifying the rules of the game by having a different winning number, such as TWENTY-ONE. As you change the winning number, the strategy for winning also changes, so challenge yourself and your child to find the new strategy as you play alternate versions. On the next page you'll find a table you can use to keep track as you play different rules. The Counting Game is a great exercise for the mind, and a fun way to keep math in the forefront at home or away! 🎲

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# The Counting Game

*A fun anytime math activity*

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*Now play the game with each different "winning number," and look for the pattern systematically!*

WINNING NUMBER	ADVANTAGE TO PLAYER	WINNING STRATEGY
3	Player ONE will always win if:	Goes first and says, "One, two, three!"
4		
5		
6		
7		
8		
9		
10		
11		
12		
15		
20		
21		
Any Number		

