

# Bullseyes and Close Calls

## A Classic Codebreaking Game

You may know this game by a different name, the one it was given by telecommunications expert Mordecai Meierowitz, when he replaced its numbers with colorful plastic pegs and thereby created the bestselling game of the 1970s. That name: “Mastermind.” With sales topping 50 million units, Mordecai’s game sold as many sets as *The Godfather* sold tickets.

But the game didn’t begin with Mordecai.

For a century beforehand, it was played on pencil and paper, under the name Bulls and Cows.<sup>1</sup> The fact that “bulls” are better than “cows” suggests 19<sup>th</sup>-century sexism extended to the bovine community, so I’ve renamed “bulls” as “bullseyes” and “cows” as “close calls.” If you prefer, feel free to use the originals. After all, the game isn’t about names; it’s about extracting information from a tight-lipped opponent.

### How to Play

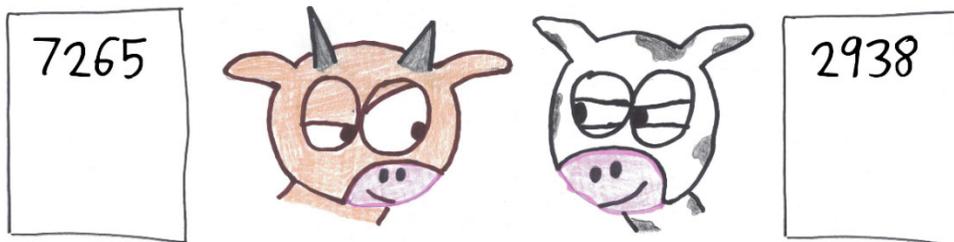
**What do you need?** Two players, pencils, and paper.



**What’s the goal?** Guess your opponent’s secret number before they guess yours.

**What are the rules?**

1. Each player writes down a **secret four-digit number**. All of the digits must be different.



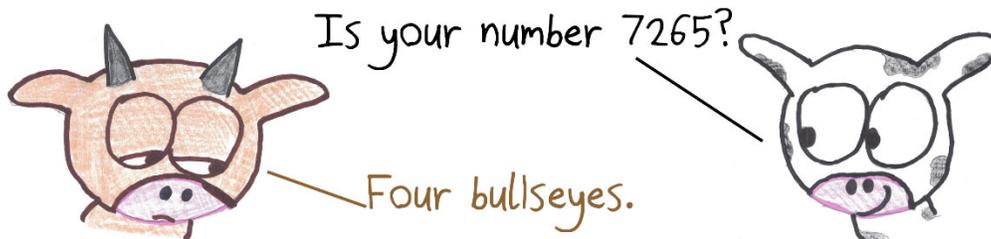
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<sup>1</sup> In England, anyway. ccording to Andrea Angiolino, it was known in Italy as “Little Numbers” or “Strike and Ball.”

2. Take turns guessing four-digit numbers. (Again, all of the digits must be different.) Your opponent will report how many of your digits were **bullseyes (right digit, right position)**, and how many were **close calls (right digit, wrong position)**, but you will **not know which digits were which**.



3. The winner is whoever **scores four bullseyes in the fewest guesses**.



## Variants

**SELF-INCRIMINATION<sup>2</sup>:** When making a guess, you must apply it to your own number, too. For example, if you're guessing "3456," and your own number is 1234, you'd say "two close calls." This requires extra strategizing, as you don't want to make a guess that reveals too much about your own number.

**SPOT THE LIE:** Once during the game, each player may give false feedback—for example, saying "one bullseye, one close call" when in reality there were no bullseyes and three close calls. (One exception: You cannot give false feedback to a totally correct four-bullseye guess.) Requires extra strategizing to use your lie at the most confounding moment.

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<sup>2</sup> This idea and the next two come from R. Wayne Schmittberger's *New Rules for Classic Games*.

**TIGHT LIPS:** Each guess receives minimal feedback, just “yes, there is at least one bullseye” or “no, there are no bullseyes.” Makes for a much slower, trickier game!

**JOTTO:** The word-game version of Mastermind. Instead of a four-digit number, each player picks a four-letter *word* (with no repeated letters). Play proceeds as in Mastermind, with one extra twist: you may only guess actual words (such as CRAB) not random combinations of letters (such as RACB). For an extra challenge, use five-letter words instead of four-letter ones.