



Triple-Triple Tic-Tac-Toe

The Big Idea:

You thought you had mastered tic-tac-toe, but guess what? It's time to level up! Play a mini game in each box of a *giant* board and see if you can win three in a row to win big. It'll keep you on your tic-tac-toes!

You Will Need:

- ★ To print: Triple-triple tic-tac-toe board
- ★ 2 pens or pencils for the 2 players

The Math Behind the Scenes:

Tic-tac-toe is a game of strategy: depending on where you place your first mark, your opponent has only so many choices, and some are easy wins for you. Now, you have to think ahead because you have to win a whole game to place your mark in a box. If you lose in an important box, it could really change your chances of winning.

Triple-Triple Tic-Tac-Toe Instructions

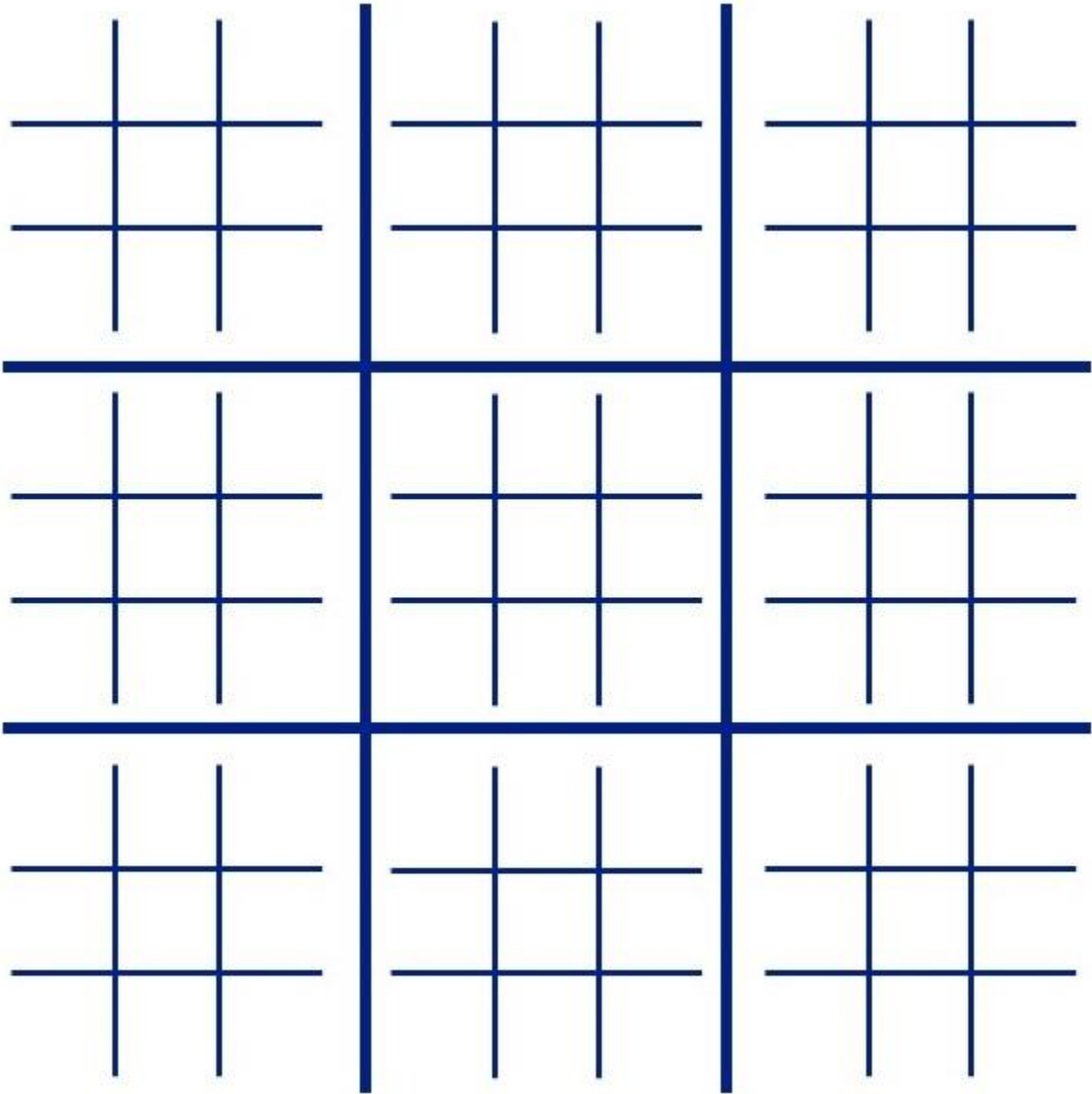
In regular Tic-Tac-Toe, 2 players take turns writing Xs and Os on the grid, each hoping to be the first player to line up 3 in a row to win the game!

On the board below, each time a player wins a mini-board, that whole square now counts as that player's shape (X or O). Whoever gets 3 *giant* squares in a row wins the game.

How to play:

1. Each player decides who will be the Xs and who will be the Os.
2. When Player 1 fills in any square on a mini-board, Player 2 has to go to the mini-board in the matching part of the giant board.
Example: If someone fills in the top left square of any mini-board, the other player must go now to the top left square on the giant board, and play any square on that mini-board.
3. Once a player wins a mini-board, that player gets to mark that whole big square with his or her shape (X or O), which takes that square out of play.
4. If Player 1 marks a mini-square that leads Player 2 to a big square that's marked out, Player 2 can choose any open big square and make a move on that mini-board.
5. The first player to mark 3 big squares in a row across, down or diagonal wins the whole game.
6. Strategy note: As the boards fill up, you have to avoid sending the other player to a board where he or she could win!

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Tic-Tac-Teasers

Try as many questions as you can! Answers upside-down below.

PreK: How many sides does a square have? Count them out loud!

Kindergarteners: Find 3 square things in the room, and line them up in a row from biggest to smallest.

1st- graders: How many squares are in a regular tic-tac-toe board? Once the first player puts an X in a square, how many blank squares are left?

2nd-graders: At least how many squares do you have to fill in a regular tic-tac-toe board to have more than half of them filled?

3rd-graders: If this board has 9 tic-tac-toe boards each of which has 9 little squares, how many little squares does the whole page have?

4th-graders: If a player draws 5 Xs on 4 of the boards and just 3 Xs on each of the other 5 boards, how many Xs were drawn?

5th-graders: If a player wins by filling just 4/9 of all the little squares with Os, how many Os were drawn?

Answers:
PreK: 4 sides: 1, 2, 3, 4.
K: Items might include books, pieces of paper, boxes, or Lego pieces.
1st: 9 squares, and 8 are left blank after the first X.
2nd: 5 squares, since then only 4 are left blank.
3rd: 81 little squares, since it's 9×9 .
4th: 35 Xs, which is 5×4 plus 3×5
5th: 36 Os, since there are 81 little squares in total.