

Puzzle Man

Meet Will Shortz, top crossword puzzle editor and KenKen expert.

Hmm, the space in the crossword grid is ten letters long, two words, and the clue is “master of all things puzzle-related.” That’s an easy one: Will Shortz! Shortz is the crossword-puzzle editor for *The New York Times* and has written or edited more than 400 puzzle books! He also brought the Japanese puzzle KenKen to *The New York Times* and it has become very popular in the U.S.

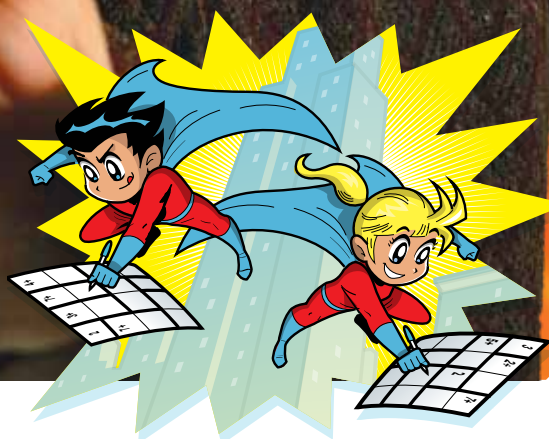
Like sudoku, the goal of KenKen is to place numbers in a grid without repeating any digits in a single row or column. But KenKen has an added mathematical challenge. “KenKen is good for anybody because it helps you get better at basic arithmetic, it twists your mind and requires you to think logically, and then it’s just fun,” Shortz told *MATH*.

Shortz has always loved math and puzzles. “When I was

in high school, I loved math and my favorite subject was geometry. I thought I would be a mathematician,” he said. “It was the puzzle aspect of math that excited me, so I went off in that direction.” He has the world’s only college degree in *enigmatology*, the study of puzzles!

Don’t be puzzled by KenKen. Keep reading and we’ll show you how to be a KenKen expert just like Will Shortz!

—by Linda Buchwald



WHAT TO DO: KenKen grids can be as small as 3 by 3 or as large as 9 by 9. On 3-by-3 grids, you have to fill each row and column with the numbers 1 to 3; on 4-by-4 grids, use the numbers 1 to 4; and so on. Read “Conquering KenKen.” Then try to complete the other grid. (Don’t worry if you can’t totally fill it in. Just try your best.)

Conquering KenKen

On a KenKen grid, look for the black outlined “cages” that cover a number of different squares. Each cage has a “target number” written in the corner and usually an operation symbol (+, −, ×, or ÷). Your job is to make sure that when all the numbers in a cage combine using the given operation, the result is the target number.

We’ll use this sample grid to show you some solving strategies. It’s a 4-by-4 grid, so we know each number 1 to 4 will appear just once in every row and column. Fill in each number as we figure it out.

4+	2÷	3-	
		3	2÷
2-	4+		
	3+		3

✓ **First, look for any cages around just one box.** See the cage in the bottom-right corner? The target number is 3 with no operation symbol, so we write 3 in that box. There’s another single-box cage in this grid. Fill it in.

✓ **Now let’s look for cages that have only one solution.** Let’s try the two-box “4+” cage in the top-left corner. What two different numbers from 1 to 4 can we add to find a sum of 4? The only answer is 3 + 1. But in which box do we put the 3? Easy—there’s already

a 3 in the second row (that single-box cage). So the 3 must go in the top box in that cage, and the 1 must go in the second row.

✓ **Which other cages have only one solution?** There is another “4+” cage. There is already a 3 in the 3rd column, so we know that the 1 needs to go in the 3rd column and the 3 needs to go in 2nd column.

✓ **The “3+” cage in the bottom row also has only one solution: 2 + 1.** There is already a 1 in the 3rd column, so the 2 has to go in that column and the 1 can go in the 2nd column.

✓ **The “3-” cage in the top row has one solution: 4 - 1.** You can figure out where to place those.

✓ **Let’s try a cage with more than one solution.** In the 2nd column, “2÷” could be either $4 \div 2$ or $2 \div 1$. There is already a 1 in both rows, so it must be $4 \div 2$. You can figure out which boxes to put those in, right? We think you can figure out the rest!

Now try this one on your own! Fill in the two single-boxes first, then the “3+” box, then the “6×” box, then the “2÷” box. Keep going!

7+	2	2-	
	3-		2÷
1	6×		
3+		7+	



GOING PRO

THE JOB: Puzzle Editor

THE MONEY: Salaries at newspapers can depend on many factors, including location and experience, but usually range from \$35,000 to \$90,000 a year.

NECESSARY SKILLS: Knowledge in a wide variety of fields; strong vocabulary, spelling, and math skills; a sense of playfulness!

HOW TO GET STARTED: Try to create your own crossword puzzles or other types of puzzles and submit them to your local paper. If you get good enough, the newspaper might publish them.

WILL’S ADVICE: “Figure out what you love more than anything else and then try and make a career out of it. Become an expert in whatever it is.”

WANT MORE KENKEN?

Check out new daily puzzles at www.scholastic.com/math/kenken or visit www.kenken.com. Also see www.scholastic.com/math/iinks for information on the American Crossword Puzzle tournament, which has a competition just for people under 25.

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