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Skyscrapers

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Departments

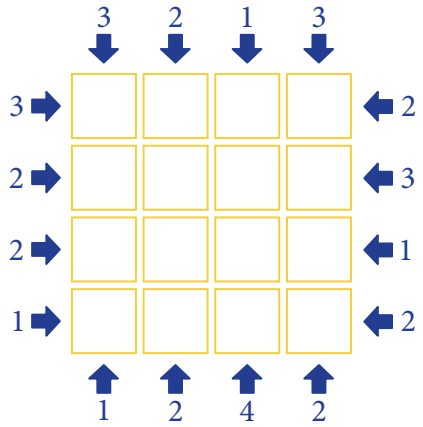
PUZZLE PIECES

Skyscrapers

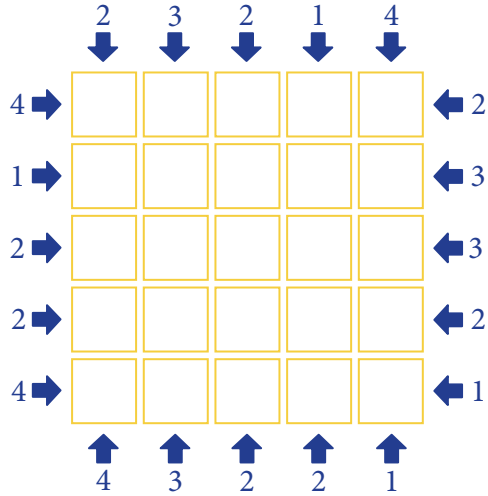
— Liza Bondurant

In a skyscraper puzzle, you are given a $n \times n$ square grid with numbers along the edges that indicate how many skyscrapers are visible from that vantage point. The goal is to fill the grid with buildings of varying heights, using numbers 1 through n for an $n \times n$ grid, so that within a row or column no number is used more than once. Use logic and deduction to determine the correct heights and complete the puzzle.

4×4 Puzzle



5×5 Puzzle



Questions

- What strategies did you use?
- What patterns do you see?
- Can you create your own skyscraper?
- What makes a skyscraper solvable?

K-12 Application

Boyd, S., Bondurant, L., & Johnson, A. (2024). Adapt it! Create your own skyscraper puzzles. *Mathematics Teacher: Learning and Teaching PK–12*, 117(1), 47–51. doi.org/10.5951/MTLT.2023.0112

Liza Bondurant is associate professor of secondary mathematics education at Mississippi State University (MS), currently residing near Jackson (MS). She strives to engage the learners she works with by using sensory stimulating activities, like skyscrapers. Liza is @lizacope1234 on Twitter.

Submit a Puzzle Today!

We are looking for puzzles and games that involve math and logic-based thinking along the lines of *Sudoku* and its variations, the game *Set*, *Nerdle* (the math version of *Wordle*), and other recreational math puzzles that could have been found in Martin Gardner's *Mathematical Games*.

Please email submissions to Michael Dorff at mdorff@math.byu.edu.