

APSU Math Problem of the Week

Problem #1: Pentomino Sudoku

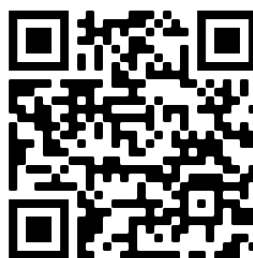
Submission Deadline: 9/3/2021 by 12pm to
Dr. Brad Fox in MMCS 109 or by email to foxb@apsu.edu

The puzzle below is a 10×10 board divided into regions with five squares each (pentominoes). Your goal is to fill each square with a single number from 1 to 5 according to the following Sudoku-esque rules: (1) each pentomino must contain the numbers 1 to 5 exactly *once* and (2) each row and column must contain the numbers 1 to 5 exactly *twice*. Note that the colors distinguish the distinct pentominoes, but are not relevant for determining the placement of numbers.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 4 | | 2 | | 1 | 2 | | |
| 1 | | | 3 | | | 5 | | | 1 |
| | 2 | | 2 | | | | | 4 | |
| 3 | | 4 | | 2 | | | | | |
| | 2 | | 3 | | | 5 | | | 4 |
| 2 | | 2 | | | | 4 | | 3 | |
| | | | | | 4 | | 4 | | 2 |
| | 1 | | | | | 2 | | 2 | |
| 5 | | | 4 | | | 3 | 2 | | 1 |
| | | 2 | | | 4 | | 1 | | |

Feel free to take this printout, or find each Problem of the Week by scanning this:

Complete the problem each week for a chance to win a prize



Rules:

1. Any APSU student can submit a solution individually, or work can be done in a small group of 2 or 3 students.
2. Solutions must be justified when appropriate to be considered correct. (does not apply to this first problem)
3. Submissions can be made to Dr. Brad Fox (MMCS 109) or electronically to foxb@apsu.edu
4. Problems will be posted each Friday afternoon with submissions due by the following Friday at 12pm. Solutions will be posted once the deadline has passed.
5. One correct submission (whether submitted individually or as a group) will be randomly chosen to win a prize such as gift cards, Galois Math Club t-shirts, and APSU CoSTEM swag, in addition to receiving the glory of having their success published on this webpage.
6. Faculty and other non-students can submit solutions, but are not eligible for prizes.