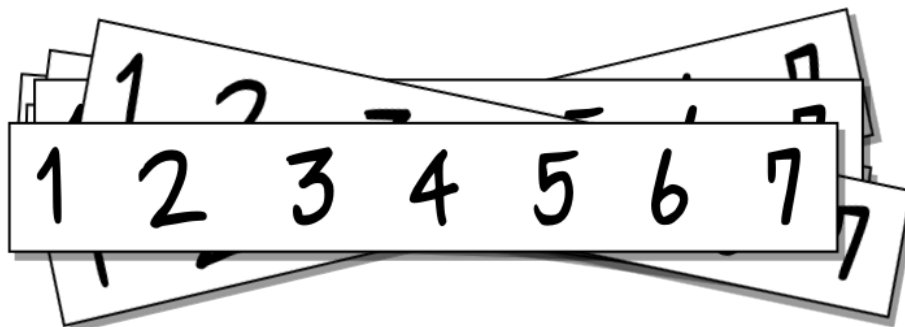


Math Challenge Problem

for October 2012

Magic Strips



A *Magic Square* is a n -by- n grid of numbers arranged so that every row, every column, and the two main diagonals all add up to the same sum. Traditionally the numbers used must all be distinct, but not this time!

Suppose you have seven strips of paper, each with the numbers 1 through 7 written in order. Your goal is to cut up these strips into some number of pieces, and then arrange them into a 7×7 grid to form a magic square. All of the number must remain upright (so no rotating or flipping the pieces). Of course, this is possible if you cut the strips into a total of 49 pieces, but can you do better?

The Challenge: What is the smallest number of pieces the strips must be cut into so the pieces can be arranged to form a magic square?

The Real Challenge: What if you had 8 strips each with the numbers 1 through 8?

Submit solutions to Ross 2239G or to oscar.levin@unco.edu by *Wednesday, October 31*.

The best solution will be posted on the Math Challenge Problem webpage, and the submitter will receive a *PRIZE!*

At the end of the semester, all submitters of correct solutions to challenge problems will be entered into a drawing for a *BIG PRIZE*.