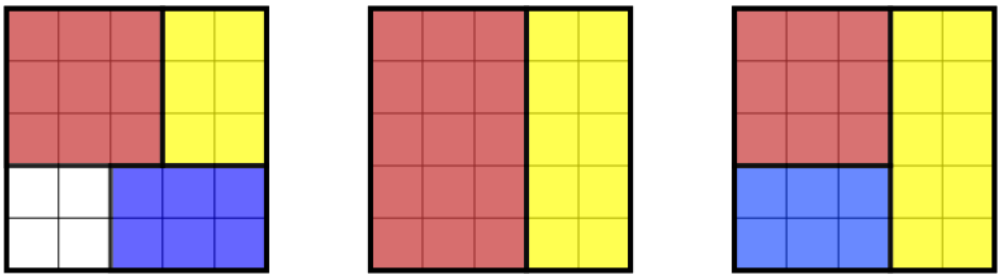
Puzzle of the Week

Filling Squares with Different Rectangles

The goal is to fill a square with all different rectangles that are roughly the same size. Use the score, which is the difference of the areas of the largest and smallest rectangles, to measure how successful the diagram is. The scores of these three squares, from left to right, are 9 - 4 = 5, 15 - 10 = 5, and 10 - 6 = 4. However, the leftmost square is not allowed as it has two rectangles with the same dimensions (2 by 3 and 3 by 2).



THE CHALLENGE: Find designs with the lowest scores you can for legally breaking up a 3 by 3, 4 by 4, 5 by 5, and 6 by 6 square.

EXPLORATION: Continue your exploration with 7 by 7, 8 by 8, 9 by 9, and 10 by 10 squares.