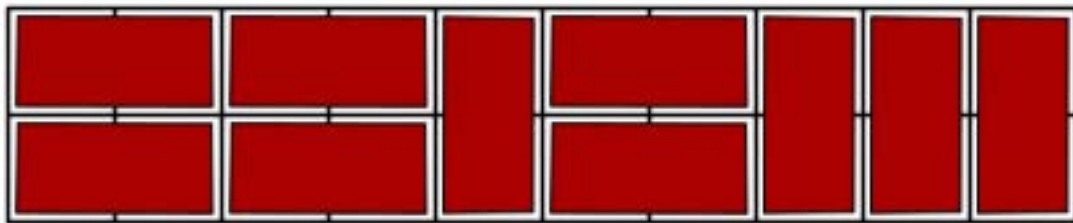


Puzzle of the Week

Tiling Rectangles

You have two puzzles. For a 1 by n rectangle, how many ways can you fill it with a mixture of 1 by 1 squares and 1 by 2 rectangles? For a 2 by n rectangle, how many ways can you fill it with 1 by 2 rectangles?



THE CHALLENGE: Why do these two puzzles give the same answers? What are the answers when the rectangles being filled are 10 long? How about when they are 20 long?

EXPLORATION: How are these two problems similar to each other and earlier puzzles? How do things change in the 1 by n puzzle if we use 1 by 1 and 1 by 3 pieces instead? How do things change in the 1 by n puzzle if we use 1 by 1, 1 by 2, and 1 by 3 pieces?