

WMS Math Challenge

April 29, 2010

Warmup: Pascal's Triangle and Taxicabs

Problem 1: Write the first 6 rows of Pascal's Triangle.

Problem 2: Draw a 2×4 grid of squares. How many paths are there that move from the lower left hand corner of the grid to the upper right hand corner of the grid by only taking steps that move North or East?

Problem 3: Draw a 3×3 grid of squares. How many paths are there from lower left to upper right?

Problem 4: Draw a 3×4 grid of squares. How many paths are there from lower left to upper right?

Problem 5: Do you see these numbers in Pascal's triangle? What can you say about the number of paths in an $m \times n$ grid?