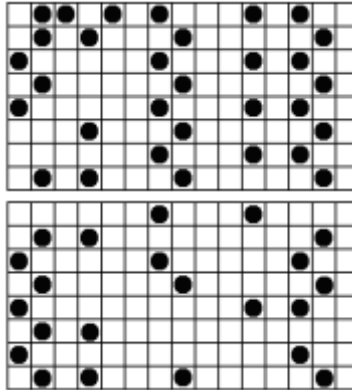


WITHOUT WORDS

Mathematical Puzzles to Confound and Delight



WW 31: SOLUTION



Number the cells from left to right, top to bottom, 1, 2, 3, 4, And we see that a dot is placed at each prime-numbered cell (see WW18).

The patterns one sees when displaying prime numbers in ways like this are curious. As no multiple of 15 is a prime number the final column in this diagram will never contain a dot. Is it true that that sixth, ninth, and tenth columns will never contain dots as well? Why does the fifth column contain only one dot? Is there pattern to the placement of dots in the fourth column, and why does the pattern eleventh column stop?

What properties of the prime numbers might you see in other sized grids?