The Squares Puzzle -- HINT

By David Pleacher

In the diagram below, there is a large square made of 21 squares, each of a different size. If the dimensions of the three smallest squares in the figure are 2x2, 4x4, and 6x6, can you determine the dimensions of all the other squares, including the one that contains the 21 smaller squares?

To solve, let x = the length of the segment in the diagram below. Then represent the lengths of other segments in the diagram in terms of x. First, you can get sides of length x + 2, then by adding 2 to that, you get sides of length x + 4. Keep going around the figure until you get two opposite sides of one of the squares represented in different expressions of x. Then solve for x.