Problem of the Week

Problem C

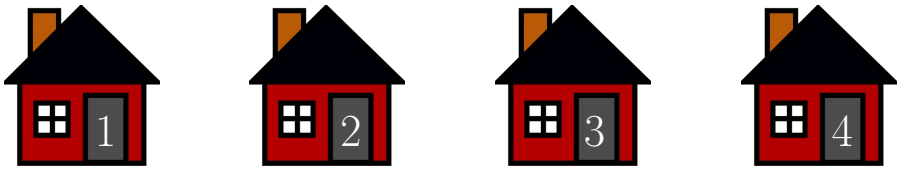
Lookover Lane

Lookover Lane divides two rows of houses. Each house on one side of the lane is directly opposite a house on the other side of the lane.

The houses are numbered consecutively $1, 2, 3$, and so on along one side. Once the end of that side of the lane is reached, the consecutive numbering continues at the house on the other side of the street opposite house number 1. The consecutive numbering continues along this second side until the last house is numbered.

If there were eight houses on the lane, they would be numbered as shown in the diagram below.

However, on the actual lane, when the residents of house number 37 look directly across the lane, they see the house numbered 84. How many houses are on Lookover Lane?



LOOKOVER LANE

Strands Number Sense and Numeration, Patterning and Algebra