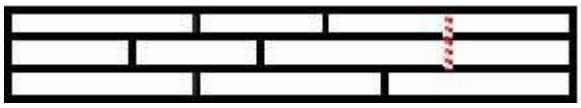
Your nephew received a set of blocks for his birthday, and he has decided to build a panel out of rows of 3”×1” and 4.5”×1" blocks. For structural integrity, he does not want the spaces between the blocks to be aligned in adjacent rows. As an example, he would not accept the 13.5” ×3” panel shown below, because the spaces between the blocks in the top two rows line up (as shown by the dotted line).



Thus, there are 2 ways to build a 7.5”×1” panel, 2 ways to build a 7.5”×2” panel, 4 ways to build a 12”×3” panel, and 7958 ways to build a 27”×5” panel.

In how many different ways could your nephew build a 48”×10” panel? A 64-bit signed integer is large enough to hold the answer.