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## PROBLEM OF THE MONTH

**Term:** February 2019

There are  $k$  heaps of beads containing 2019 beads in total. In each move we choose a heap: either remove it or divide it into two not necessarily equal parts. Find the maximal possible value of  $k$  such that for any initial distribution of beads after finite number of moves one can get  $k$  heaps with pairwise distinct number of beads.