

12. (Note: We skipped this question because the wording was difficult to understand). Justify your answer. If  $m$  balls are placed at random into  $m$  cells, find the probability that exactly one cell remains empty. For values of  $m = 2, 3, \dots, 10$ , compute the probability. You can use a calculator, or  $R$ . As  $m$  increases, what do the numbers suggest is the limit of the probability?