Name: _____ (key) _____

Show all work clearly and in order.

1. What are the four steps in Pólya's four step process to solving problems?

    1. Understand the Problem.

    2. Devise a plan.

    3. Carry out the plan.

    4. Look back.

2. How many unique ways can you rearrange the letters in NOON? Solve this problem using Pólya's four step process above by writing out your process at each step.

  ① How many ways can you create "words" using the letters N, O, O and N so that the "words" are all distinct?

  ② Start with the N's on the left and move them around until all possibilites have been found.

  ③ NNOO
      NONO
      NOON   } 6 total ways
      ONNO
      ONON
      OONN

  ④ By slowly moving the N's to the right, I think it helped make sure no "words" were missed.

    Is this the best way to solve the problem?