Assignment

Create the following functions:

- Create a function that rotates the items in an array by n steps and returns the rotated array. The function should take in an array, and how many spaces it should rotate (n).

  Do not use Ruby's built-in `Array.rotate` function.

  - Example: If your input is: ["cat", "dog", "mouse", "shoe"], 2 Your output should be: ["mouse", "shoe", "cat", "dog"]

    If your input is: [1, 2, 3, 4, 5], 1 Your output should be: [5, 1, 2, 3, 4]

  - Extra Credit:

    - Be able to accept negative n values and rotate your array backwards. Example: If your input is: ["cat", "dog", "mouse", "shoe"], -1 Your output should be: ["dog", "mouse", "shoe", "cat"]

    - Design your function to rotate the array 'in place', meaning it will perform the operation without creating additional arrays.

- Create an n factorial function. A factorial is the evaluation of n! - This number is calculated by multiplying every number from 1 to and including n.

  The first few factorials are:

  1! = 1 = 1 2! = 2 = 1 * 2 3! = 6 = 1 * 2 * 3 4! = 24 = 1 * 2 * 3 * 4 5! = 120 = 1 * 2 * 3 * 4 * 5 6! = 720 = 1 * 2 * 3 * 4 * 5 * 6

  We use factorials for various different uses in mathematics. A common real-life use case would be if you wanted to figure out how many different ways a certain set of items could be arranged in a series. (This would be known as a permutation)

  Say we had four pictures, and we wanted to figure out how many ways we could arrange the four pictures next to each other. We could use 4 factorial. Giving us 24 possible configurations of the four paintings.

  [1] [2] [3] [4]

  Do not use Ruby's built-in `Math.factorial` function.

  - Example: If your input is: 6 Your output should be: 720 = (1 * 2 * 3 * 4 * 5 * 6)

    If your input is: 7 Your output should be: 5040 = (1 * 2 * 3 * 4 * 5 * 6 * 7)

    Edge cases: If your input is a negative integer Your output should be: undefined

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    If your input is: 0
    Your output should be: 1
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Note: You are urged to attempt both problems, however only one will be submitted for grading. You can choose which

assignment you would like to submit.