

Name: \_\_\_\_\_

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1. Find a recursive formula for the number  $t(n)$  of permutations of  $[n]$  whose cube is the identity permutation.

2. Find an explicit formula for the sequence  $\{a_n\}_{n \geq 0}$ , where  $a_{n+2} = a_{n+1} + a_n$ ,  $a_0 = 1$  and  $a_1 = 3$ .