Day 14

Which *n*-gon?

Turn to someone sitting next to you and take about 4 minutes to discuss:

Let G be the subgroup of rotations inside D_n for some $n \geq 3$. Suppose G has exactly three distinct subgroups: G itself, the trivial subgroup $\{R_0\}$, and a subgroup of order 11. What is n?

Permutation groups

1. What is the order of (1 4 6) in S_7?

(A) 6

(B) 3

(C) 7

(D) None of the above

2. How do you write (1 2 4)(2 4 6)(6 7) in S_7 as a product of disjoint cycles?

(A) (1 2)(4 6 7)

(B) (1 2 4)(6 7)

(C) (1 2 4 6 7)

(D) None of the above

3. The permutation (1 2 3 7) in S_7 is...

(A) even.

(B) odd.