Day 18

Which rotation?

Turn to someone sitting next to you and take about 2 minutes to discuss:

Suppose R is a nontrivial rotational symmetry of the following design with the property that R^{2022} is the identity. What is R?

Automorphisms

1. "**Z** has more than one automorphism."

This statement is...
(A) True.
(B) False.

2. How many automorphisms $\phi : Z_{15} \to Z_{15}$ are there such that $\phi(5) = 5$?

(A) 6

(B) 3

(C) 2

(D) None of the above