Name: _____

Email: _____

Math Club: Biweekly Contest Week Two

Release Date: September 13, 2023

Instructions: Solve the following problem as best you can. The first student to submit the correct solution via email to tamumathcontest@gmail.com or to Jeremy Kubiak in Blocker 336D (with time stamp) wins!

Problem 1. Let z be a complex number such that $z^5 = 1$ and $z^4 + z^3 + z^2 + z^1 + 1 = 0$. Suppose, that $z + z^{-1}$ is a root of the integer polynomial $x^2 + bx + c$. Find b and c.