MAT223 – Linear Algebra I – Winter 2023

Written Assignment 2

Due Sunday 19 February at 9pm on Crowdmark

Notes and instructions

- This assignment contains four problems, some with more than one part. Note that the grading scheme for each problem is given below the problem!
- You should get an email with a personalized submission link from Crowdmark several days before it's due. Until you receive that link, there's nothing you need to do on Crowdmark. **Late assignments will receive a grade of 0.**
- Organize your solutions neatly and write clearly/legibly. If we can't read your submission, then it won't get any points.
- Explain your solutions to each problem clearly. Your goal with this and any other assignment is to communicate your answers and your reasoning for why they are correct as clearly as possible to the reader.

Problems

1. Find all complex numbers z that satisfy the equation $z^5 - \overline{z} = 0$, showing all the work required to find them. Provide a *large*, clear sketch of where your answers are on the complex plane.

   State your final list of solutions in both polar and standard form, making sure to very clearly indicate your