MA2287: Complex Analysis Exam Notes

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1 Question 1:

1.1 Sketch the region in the complex plane determined by the inequality

- $|z-4| > 3|z+4|$ (2023 (a))

1.2 Determine all solutions to roots of unity

1.3 Determine and sketch the image under the mapping

1.4 Find z where the function is 0

1.5 Calculate principal value Log(z)

1.6 Prove the following