

MATH 114 - Fall 2016 - Assignment 3

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Problem 1. Complex Numbers - Euler's Formula

a)

$$\begin{aligned} e^{i\frac{\pi}{2}} \\ \cos \frac{\pi}{2} + i \sin \frac{\pi}{2} \\ 0 + i(1) \\ i \end{aligned}$$

b)

$$\begin{aligned} e^{2\pi \frac{i}{3}} \\ \cos 2\pi + \frac{i}{3} \sin 2\pi \\ 1 + \frac{i}{3}(0) \\ 1 \end{aligned}$$

Problem 2.

Problem 3.

Problem 4.