COMPLEX VARIABLES
FALL 2024

ASSIGNMENT 4.3
DUE SEPTEMBER 25

Exercise 1. Textbook exercise 1.4.5.

Exercise 2. Textbook exercise 1.4.10.

Exercise 3. Let $f(z)$ be a complex-valued function defined on a deleted neighborhood of z_0. Show that if $\lim_{z\to z_0} f(z) = a$, where $a \in \mathbb{C}^\times$, then $f(z)$ is bounded away from zero on $D^*(z_0; r)$ for some $r > 0$. That is, show there are constants $M, r > 0$ so that if $z \in D^*(z_0; r)$, then $|f(z)| > M$.