

MATH 362: Problem Set #19

Read Sections 1–2 (handout) of Chapter 3: “What is Area?” from **Excursions into Mathematics**, by Anatole Beck, Michael N. Bleicher and Donald W. Crowe.

- ★29. Let X be a compact metric space, and suppose $f_n: X \rightarrow \mathbb{C}$ for each n . Assume also that $f: X \rightarrow \mathbb{C}$. Show that $f_n \rightarrow f$ uniformly on X if and only if $f_n(x_n) - f(x_n) \rightarrow 0$ for all *convergent* sequences (x_n) in X .