

Duke Math 431
Spring 2015

Homework 10

Due Friday, April 10

Reading. Sections 5.7, 6.1.

Problems.

Section 5.3: #1, 2, 4, 5

Section 5.6: #1, 3, 7, 8, 9

*Remark: For #9, the given definition of a limit point is incomplete. The definition should instead be the following: “A point $d \in M$ is called a **limit point** of a sequence $\{x_n\}$ if for every $\epsilon > 0$ and integer N , there is an $n \geq N$ so that $\rho(d, x_n) \leq \epsilon$.” Compare the definition on page 56. To solve this problem, be sure to find the proposition from Chapter 2 whose proof you need to edit.*