Math 425 Autumn 2018
Homework 1 **Due Friday, January 12**

Chapter 3 [Pugh, pg. 198]: 19, 27(b), 28(i⇔ii).

Additional problems

1. Prove that the rational ruler function is continuous at each irrational $x \in [0, 1]$.

2. Let $S \subset \mathbb{R}$. Show that $osc_x(\chi_S) = 1$ if $x \in \partial S$ and $osc_x(\chi_S) = 0$ if $x \notin \partial S$.