

MATH 347: FUNDAMENTAL MATHEMATICS, FALL 2015

HOMEWORK 6

Due on Wednesday, Oct 14

Exercises from the textbook. 4.33, 4.34, 4.35, 4.36, 4.39

Out-of-the-textbook exercises (these are as mandatory as the ones from the textbook).

1. Show that the pairs of sets below have the same cardinality:

(a) $\{0\} \cup \{\frac{1}{n} : n \in \mathbb{N}\}$ and $\{\frac{1}{n} : n \in \mathbb{N}\}$.

(b) $[0, 1)$ and $(0, 1)$.

HINT: Use part (a) to “absorb” the 0 into $(0, 1)$.