

MATHEMATICS 3210. Homework 3.

September 10, 2001

1. §3, # 3.1, 3.5.
2. §4, # 4.1, 4.12.
3. Find infimum and supremum of each of the following sets:
 - a) $E = \{4, 3, 2, 1, 8, 7, 6, 5\}$.
 - b) $E = \{x \in \mathbb{R} \mid x^2 - 3x - 5 = 0\}$.
 - c) $E = [a, b)$ where $a < b$ are real numbers.
 - d) $E = \{p/q \in \mathbb{Q} \mid p^2 < 2q^2 \text{ and } p, q > 0\}$.
 - e) $E = \{x \in \mathbb{R} \mid x = 1 + (-1)^n, \text{ for } n \in \mathbb{N}\}$.
 - f) $E = \{x \in \mathbb{R} \mid x = 1/n - (-1)^n, \text{ for } n \in \mathbb{N} - \{0\}\}$.
 - g) $E = \{1 + (-1)^n/n : n \in \mathbb{N} - \{0\}\}$.