

MATH 554- 703 I - ANALYSIS I
HOMEWORK ASSIGNMENT # 2
DUE THURSDAY - SEPT. 6, 2001

1. Prove that each nonempty set of real numbers which is bounded from below has a greatest lower bound.
2. Prove the trichotomy property for the order relation $<$ using our definition in terms of the positive set P , i.e.

*For each $a, b \in F$ exactly one of the following conditions hold:
either $a < b$, or $b < a$, or $a = b$.*

3. Prove the transitive property for the order relation $<$ using our definition in terms of the positive set P , i.e.

If $a < b$ and $b < c$, then $a < c$.

In addition, work the following problems from the text:

Page 17: 8 a), 9, 11

Page 27: 5