Homework 2

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1 Ross 4.15

For this we first prove that $\frac{1}{n} > 0 \forall n \in \mathbb{N}$. First we multiply both sides by n, since $n \in \mathbb{N}, n > 0$, the sign does not change.
We get $LHS = 1$ $RHS = 0$, since $1 > 0$ is an axiom, therefore we know that $1/n > 0$.
Now $\frac{1}{n} \geq 0 \forall n \in \mathbb{N}$, so by the ordered field axioms $a \leq b$.
Q.E.D.

2 Ross 4.16