Test 1 10/10

Know Definitions Let $S \subseteq \mathbb{R}$ and $x \in \mathbb{R}$.

x is an upper bound for S (lower bound).

S is a bounded set

x is the sup, inf, max, min of S.

S is dense in $\mathbb{R}$

S is closed

Suppose $\{a_n\}$ is a sequence.

$\{a_n\}$ converges to ~~X~~.

$\{a_n\}$ is monotone increasing / decreasing

Results: ① Completeness Axiom.

Thm 1.5 Archimedean Property.

Thm 1.9 $\mathbb{Q}$ is dense in $\mathbb{R}$.

Thm 1.11 Δ - inequality

Prop 1.12 Absolute Value Lemma.

Know how to use, not how to prove.

Lemma 2.9 Comparison Lemma.

"Limit Laws" - linearity, prod., quotient rules
- basic computations.

$$\lim_{n\to\infty} c = c \quad , \quad \lim_{n\to\infty} \frac{1}{n} = 0.$$

Boundedness Lemma.

Thm 2.25 Monotone Convergence Theorem.

Thm 2.19 ~~Subsequential Density~~ Alternate density definition.

Thm. 2.22 $[a,b]$ is closed.

Problems? T/F & Give Examples...

- look at early problems 1, 2 in every section.

HWS 1-3