HW 5

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Problem 1

Show that if a sequence of rational numbers converges to a rational number then the sequence is Cauchy.

Proof: Let $(a_n)_{n=1}^{\infty}$ be a sequence of rational numbers. If a_n converges to $L \in \mathbb{Q}$ if for all $\epsilon > 0$ there exists $N > 0$ such that $n > N \Rightarrow |a_n - L| < \epsilon$. □

Problem 2

Problem 3

Problem 4

Problem 5

Problem 6

Bonus 5.4.4

Bonus 5.4.3