PS 1

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Problem Set 1

1. Prove that $lim_{x \to -1} 2x + 1 = -1$.

Note: For any given $\epsilon > 0$, there exists a $\delta > 0$ such that $|f(x) - f(x_0)| < \epsilon$ whenever $|x - x_0| < \delta$.
Draft:

$$|2x + 1 - (-1)| < \epsilon$$
$$|2x + 2| < \epsilon$$
$$|2||x - (-1)| < \epsilon$$
$$|x - (-1)| < \frac{\epsilon}{|2|}$$
$$\delta \leq \frac{\epsilon}{2}$$