Math 299 **Homework assignment, due 11/18**

Compute the sup, inf, max and min (whenever these exist) for the following sets.

1. $S_1 = \left\{ 1 + \frac{1}{n} \,|\, n \in \mathbb{N} \setminus \{0\} \right\}$
2. $S_2 = (-3, -1] \cup [1, 2) \cup \{7\}$
3. $S_3 = (-3, -1] \cup [1, 2) \cup \{-4\}$
4. $S_4 = \{y \,|\, y = x^2 - 9, \text{ and } x \in \mathbb{R}\}$
5. $S_5 = \{x \,|\, x^2 - 9 < 0, \text{ and } x \in \mathbb{R}\}$