Answer on Question #53052 – Math – Real Analysis

S={n:n belongs to Z} what is the Sup S and Inf S? please explain the answer?

Solution

Z designates the set of integer numbers (positive or negatives including zero).

The supremum Sup S is the least upper bound of S. The infimum Inf S is the greatest lower bound of S.

So S is bounded neither from above nor from below and therefore

$\boldsymbol{sup\ S} = +\infty,\ \ \boldsymbol{inf\ S} = -\infty$.