

Let $A_n = [\frac{1}{n}, n]$ for $n \in \mathbb{Z}^+$. We are asked to compute $\bigcup_{n=1}^{\infty} A_n - \bigcap_{n=1}^{\infty} A_n$.

First, let's find $\bigcup_{n=1}^{\infty} A_n$. As n increases, the left endpoint $\frac{1}{n}$ approaches 0, and the right endpoint n increases without bound. This means that the union of all A_n is the interval $[0, \infty)$.

Next, $\bigcap_{n=1}^{\infty} A_n$ represents all elements that belong to every interval A_n . Since all A_n are disjoint, their intersection is empty. Therefore, $\bigcap_{n=1}^{\infty} A_n = \emptyset$.

Thus, $\bigcup_{n=1}^{\infty} A_n - \bigcap_{n=1}^{\infty} A_n = [0, \infty) - \emptyset = [0, \infty)$.