Proof Without Words:
The Alternating Harmonic Series Sums to \( \ln 2 \)

**Claim.** \[ \sum_{n=0}^{\infty} (-1)^n \frac{1}{n+1} = \ln 2. \]

Summary We demonstrate graphically the result that the alternating harmonic series sums to the natural logarithm of two. This is accomplished through a sequence of strategic replacements of rectangles with others of lesser area. In the limit, we obtain the region beneath the curve \( y = \frac{1}{x} \) and above the \( x \)-axis between the values of one and two.