Example Document

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For the left Riemann sum, approximating the function by its value at the left-end point gives multiple rectangles with base Δx and height $f(a+i\Delta x)$. Doing this for $i = 0, 1, \ldots, n-1$, and adding up the resulting areas gives

$$A_{left} = \Delta x \left[f(a) + f(a + \Delta x) + f(a + 2\,\Delta x) + \cdots + f(b - \Delta x) \right].$$