CUR rook results

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Algorithm 1 Recursive Integral

1: **function** RECURSIVEINTEGRAL(f,grid)
2:      ans $\leftarrow \sum_{x \text{ in grid}} f(x)\Delta x$
3:      Compute error
4:      **if** error > tolerance **then**
5:          (grid1, grid2) $\leftarrow$ split grid
6:          term1 $\leftarrow$ RecursiveIntegral(f, grid1)
7:          term2 $\leftarrow$ RecursiveIntegral(f, grid2)
8:          ans $\leftarrow$ term1 + term2
9:      **end if**
10:     **return** ans
11: **end function**