

This quiz is worth 10 points and you have 10 minutes to complete it. Show all work and circle your final answers.

Calculators are NOT allowed today.

1. (10 points) Suppose you wish to approximate the area under the graph of $f(x) = \sqrt{x}$ on the interval $[a, b] = [1, 3]$.

(a) Approximate the area described above using $N = 4$ rectangles and the Right Hand Sum. You do *not* need to use or write down any sigma notation in this part of the problem. A labeled picture of the graph and the rectangles in the sum will give you partial credit.

(b) Use sigma notation to write down the Right Hand Sum with $N = 100$ rectangles for the area under $f(x) = \sqrt{x}$ on the interval $[a, b] = [1, 3]$. Simplify or rewrite the sum until the only letter that appears in the general term of the sum is k . (Don't calculate the value of the sum, just write it down in sigma notation.)