Code Riemann Sum using right-handed endpoints

1. input for number of rectangles
2. use the function
3. draw function and number of rectangles

Students would use the program to vary the number of rectangle to investigate:

1. How does the area under the curve change with more or less rectangle.
2. Determine if the area is an over or under estimate of the area under

Code Manipulation:

1. Students change code to find Riemann sums: left-hand endpoint
2. Use their new code to investigate how the area under the curve changes with more or less rectangles
3. Determine if the area is an over or under estimate of the area under

Extension Code Manipulation

1. Students change code to find Riemann sums: left-hand endpoint
2. Use their new code to investigate how the area under the curve changes with more or less rectangles
3. Determine if the area is an over or under estimate of the area under
4. Determine what geometric shape – trapezoid, parabola … would provide a better estimate and recode to use this shape to estimate the area under the curve.

Videos:

<https://www.khanacademy.org/math/ap-calculus-ab/ab-integration-new/ab-6-3/v/generalizing-a-left-riemann-sum-with-equally-spaced-rectangles>

<https://www.youtube.com/watch?v=8jK6e41HWzo>