

Lab 1

Riemann Sums.

The following data gives the **median** income of male college and high school graduates, 25 to 34 years old, for the years from 1958 to 1983, in thousands of dollars.

Year	College Grads (CG)	High School Grads (HSG)
1958	5.95	4.8
1961	6.8	5.02
1963	6.95	5.08
1965	7.45	6.15
1967	8.8	6.9
1969	10.4	8
1971	10.95	8.55
1973	12.2	10.2
1975	13.2	10.8
1979	17.4	14.3
1981	20.5	15.2
1982	21.1	15.1
1983	21.95	15.75

Recall that the “median” of a set of data is that value for which half the data points are above and half below it.

Use Maple to graph these data on the same graph. Let the x-axis be the year and the y-axis be thousands of dollars ranging from 0 to 25. Explain in words the meaning of the quantity (assuming that you could compute it)

$$u = \int_{1961}^{1975} HSG \, dt.$$

Specify the units for u .

Calculate the left sum and right sum for u .

Similarly explain the meaning of the quantity

$$v = \frac{\int_{1961}^{1975} CG \, dt}{1975 - 1961}.$$

Specify its units. Compute the left and right sum for it also.