

- 1) (8 pts) In programming, the need to use subroutines that someone else has written arises frequently. However, it is almost as often the case that you need this subroutine to do something different than what it is explicitly programmed to do.

The sorting routine used in HW 28 is a good example of this. This subroutine will sort an array in increasing order. However, oftentimes, you need to sort an array in decreasing order instead.

Write a program that will sort the data from HW 28 in decreasing order using the same `qsort` routine. You cannot make any modifications to the `qsort` routine.

- 2) (8 pts) Rewrite the suite of subroutines we developed in class for implementing the trapezoidal rule under the assumption that `n` is no longer the number of subdivisions of the  $x$ -axis, but instead, `n` is the actual number of points in the table. You only need to make about 10 changes to the routines, but this does require some thinking.