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To deal with this assignment, at first, I tried to understand the practice in the iLearn. Then, put all the stuffs needed into the .h file, like SEGMENT, definition of queue, and initial_queue function etc.

Next, I completed the component of the function to fulfill the assigned requirement. Like in the initial_queue function, I reset the memory size of elements, capacity, head, and tail of the queue. In the enqueue and dequeue function, change the value of tail or head separately, while the memory size is too small to use, change the size then reset the head of queue to the beginning position and shift the elements in the queue. In the print_queue function, print elements of a queue from the head to the tail and make a newline for every 20 elements.

To compute the area, I used the while loop with the condition that the difference between area and last must be greater than 1e-6, which is epsilon equivalently. Then, compute the variable first, and then the area using the Riemann sum. If the area is calculated well and fits the condition of the loop, calculate the variables R1, R2, and R3.

Eventually, while all the calculating is done, print the variables R1, R2, and R3 as required.