

Queues

1. What would be the contents of **q** and **s** after the following code is executed?

```
enqueue (q, 10)
enqueue (q, 90)
enqueue (q, 50)
enqueue (q, 0)
enqueue (q, 40)
enqueue (q, 20)
enqueue (q, 0)
enqueue (q, 60)
enqueue (q, 10)
enqueue (q, 20)
enqueue (q, 0)
sum = 0
c = queueCount(q)
loop (c != 0)
    dequeue (q, x)
    if (x != 0)
        enqueue (q, x)
        sum += x
    else
        push(s, sum)
        sum = 0
    end if
    c = c - 1
end loop
```

2. Write an algorithm that creates a stack from a queue: the front of the queue is to be the top of the stack. After creating the stack the queue is to be empty.