Week 2 Quiz

Q1.

What is the big-O running time for an algorithm that performs $5*(logn) + 2000*(n) - 15*(nlogn) + .001*(n^2)$ operations?

    A. O(n)

    B. O(nlogn)

    C. O(2^n)

    D. O(n^2)

Q2.

What is the big-O running time of the following function?

```python
def mystery(lst):
    sum = 0
    for i in range(len(lst) - 1):
        if i % 2 == 0: # i is even
            total += 5 * lst[i] - 1

    for i in range(len(lst) / 2):
        for j in range(500):
            if i < j + 1:
                total -= j

    return total
```

    A. O(1)

    B. O(n)

    C. O(nlogn)

    D. O(n^2)

Q3.

After the second pass of the selection sort algorithm, a list looks like this: [5, 19, 55, 21, 88, 81, 59]. After the *third* pass of selection sort, what will the list look like?

    A. [5, 19, 21, 55, 88, 81, 59]

    B. [5, 19, 55, 59, 21, 88, 81]

    C. [5, 19, 21, 55, 59, 81, 88]

    D. [55, 5, 19, 21, 88, 81, 59]