

## 1) (10 pts) DSN (Recursive Coding)

Define the weighted sum of an integer array  $a[0], a[1], \dots, a[n-1]$  to be  $\sum_{i=1}^n (ia[i-1])$ . For example, the weighted sum of the array  $[7, 5, 8]$  would be  $1 \times 7 + 2 \times 5 + 3 \times 8 = 41$ . Write a recursive function that takes in an array `numbers` and its length `n`, and returns its weighted sum. You may assume that there will be no issues with integer overflow.

```
int weightedSum(int numbers[], int n) {
```

```
}
```