1) (10 pts) DSN (Recursive Coding)

Define the weighted sum of an integer array a[0], a[1], ..., 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 and that **`n` is non-negative.**

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

    if (n == 0) return 0;

    return n*numbers[n-1] + weightedSum(numbers, n-1);

}
```

Grading: 3 pts for base case, give 2 pts if they use n = 1,
1 pt return
3 pts for calculating term n*numbers[n-1]
1 pt rec call
1 pt param numbers
1 pt param n-1