

## Big-O for Problem 1

Since arrays are being used, there are a few dependencies: digits in each number occupying array space and the number of array entries.

Each of the combination lines within the separate sections of sorting, e.g.

```
sortarr[inde]=sortarr[inde]+1;
```

```
sortarr[i] += sortarr[i-1];
```

```
b[sortarr[indx]] = a[i];
```

all depend on these parameters, since each number has # of digits  $b$  and the array has # of entries  $n$ .

Thus, we have  $O(d*n)$ , as there are  $n$  entries, with  $b$  digits each. This gives a linear big O complexity.