

## Challenge Problem 21: Self-Counting Sequence

The sequence of numbers in the boxes below is what we might call a self-counting sequence because the  $i^{\text{th}}$  box contains a number telling how many times the digit  $i$  appears in the boxes.

|   |   |   |   |
|---|---|---|---|
| 1 | 2 | 1 | 0 |
| 0 | 1 | 2 | 3 |

In particular the boxes contain one 0, two 1s, one 2, and zero 3s.

Fill in the boxes below to obtain a self-counting sequence.

|   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|
|   |   |   |   |   |   |   |   |   |   |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |