

4	3	5	5	7
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numbers

1) Find max
max = 7.

2) Create a new array size? $\boxed{\text{max} + 1}$

0	1	2	3	4	5	6	7
0	0	0	0	0	0	0	0

bucket

b

3) Stepping thru numbers ~~for~~ add 1 to each corresponding bucket slot.

0	1	2	3	4	5	6	7
			1	1	2		1

bucket

$$\text{bucket}[\text{number}[\text{0}]] = 1$$

$$\text{bucket}[\text{numbers}[\text{0}]] = 1 + \text{bucket}[\text{number}[\text{0}]]$$

4) Step thru bucket array i (manually run i)
for ($b = \text{0}$ $< \text{max} + 1$)

if $\text{bucket}[b] > 0$

$\text{numbers}[\text{0}] = 3$
 $\text{numbers}[\text{0}] = b$
 $i++$

loop, count = 1 \rightarrow bucket[b] times

0	1	2	3	4	
3	4	5	5	7	

numbers