

\*

Level 0 list is empty. head is null.

\*

Adding R 3.  
Luck is 0.

>\*

Adding R 3.

start is null on level 0.

>\*

Adding R 3.  
Find R.

```
>* R  
  3
```

Adding R 3.

Level = 0 so insert key and value.

\* R  
3

Adding M 0.  
Luck is 1.

\*

\* R  
3

Adding M 0.

Add one level to match luck.

>\*

\* R  
3

Adding M 0.  
start is null. level is 1.



>\*

\* R  
3

Adding M 0.  
find M.

>\* M

\* R  
3

Adding M 0.

level <= luck so insert M.

\* M

>\* R  
3

Adding M 0.

start is still null. level = 0.

\* M

>\* R  
3

Adding M 0.  
Find M.

\* M

>\* M R  
0 3

Adding M 0.

level=0 so insert key and value.

```
*   M
   |
>*  M  R
   0  3
```

Adding M 0.

level<luck so set node value in previous level.

```
*  M
  |
*  M  R
   0  3
```

Adding W 4.

Luck is 1.

No need to add levels.

```
>*  M
    |
*   M  R
    0  3
```

Adding W 4.

start is null. level = 1.



```
* >M
  |
*  M  R
   0  3
```

Adding W 4.  
Find W.

```
* >M      W
  |
*  M  R
  0  3
```

Adding W 4.

level <= luck so insert W.

```
*   M       W
   |
* >M   R
   0   3
```

Adding W 4.

Use value of node to get start on level=0.

```
*  M      W
  |
*  M >R
  0  3
```

Adding W 4.  
Find W.

```
*   M       W
   |
*   M >R    W
   0  3    4
```

Adding W 4.

Level=0 so insert key and value.

```
*   M       W
   |       |
*   M >R    W
   0  3    4
```

Adding W 4.

level<luck so set value of node in previous level.

*	M		W
*	M	R	W
	0	3	4

Adding I 7.

Luck is 0.

```
>*      M      W
      |      |
*      M  R  W
      0  3  4
```

Adding I 7.  
start is null on top level.



```
>*      M      W
      |      |
*      M  R  W
      0  3  4
```

Adding I 7.  
find I.

*	M		W
>*	M	R	W
	0	3	4

Adding I 7.

Next level down. start is still null.

*	M		W
>*	M	R	W
	0	3	4

Adding I 7.

Find I.

```
      *      M      W
      |      |
>*  I  M  R  W
    7  0  3  4
```

Adding I 7.

level=0 so add key and value.

*		M		W
*	I	M	R	W
	7	0	3	4

Adding P 4.  
luck=0.

```
>*      M      W
      |      |
*  I  M      R  W
    7  0      3  4
```

Adding P 4.

*		>M		W
*	I	M	R	W
	7	0	3	4

Adding P 4.

*		M		W
*	I	>M	R	W
	7	0	3	4

Adding P 4.



*		M		W
*	I	>M	R	W
	7	0	3	4

Adding P 4.

*		M			W
*	I	>M	P	R	W
	7	0	4	3	4

Adding P 4.

*		M			W
*	I	M	P	R	W
	7	0	4	3	4

Adding A 4.

luck=0.

```
>*           M           W
           |           |
*         I  M  P  R  W
          7  0  4  3  4
```

Adding A 4.

```
>*          M          W
          |          |
*         I M P R W
          7 0 4 3 4
```

Adding A 4.

*		M			W
>*	I	M	P	R	W
	7	0	4	3	4

Adding A 4.

*		M			W
>*	I	M	P	R	W
	7	0	4	3	4

Adding A 4.

```
      *           M           W
      |           |           |
>*    A   I   M   P   R   W
      4   7   0   4   3   4
```

Adding A 4.



*			M			W
*	A	I	M	P	R	W
	4	7	0	4	3	4

Adding S 5.

luck=0.

```
>*           M           W
           |           |
*   A   I   M   P   R   W
    4   7   0   4   3   4
```

Adding S 5.

*			>M			W
*	A	I	M	P	R	W
	4	7	0	4	3	4

Adding S 5.

*				M			W
*	A	I	>	M	P	R	W
	4	7	0	4	3		4

Adding S 5.

*			M			W
*	A	I	M	P	>R	W
	4	7	0	4	3	4

Adding S 5.

*			M				W
*	A	I	M	P	>R	S	W
	4	7	0	4	3	5	4

Adding S 5.

*				M				W
*	A	I		M	P	R	S	W
	4	7		0	4	3	5	4

Adding K 2.  
luck=1

```
>*
      M           W
      |           |
*  A  I  M  P  R  S  W
  4  7  0  4  3  5  4
```

Adding K 2.



```
>*
      M           W
      |           |
*   A   I       M   P   R   S   W
   4   7       0   4   3   5   4
```

Adding K 2.

```
>*           K  M           W
           |
*   A   I     M   P   R   S   W
    4   7     0   4   3   5   4
```

Adding K 2.

*			K	M				W
>*	A	I		M	P	R	S	W
	4	7		0	4	3	5	4

Adding K 2.

*		K	M				W
*	A	>I	M	P	R	S	W
	4	7	0	4	3	5	4

Adding K 2.

*			K	M				W
*	A	>I	K	M	P	R	S	W
	4	7	2	0	4	3	5	4

Adding K 2.

*			K	M				W
*	A	>I	K	M	P	R	S	W
	4	7	2	0	4	3	5	4

Adding K 2.

*			K	M				W
*	A	I	K	M	P	R	S	W
	4	7	2	0	4	3	5	4

Adding J 0.  
luck=0.

>*				K	M				W
*	A	I		K	M	P	R	S	W
	4	7		2	0	4	3	5	4

Adding J 0.



>*				K	M				W
*	A	I		K	M	P	R	S	W
	4	7		2	0	4	3	5	4

Adding J 0.

*				K	M			W	
>*	A	I		K	M	P	R	S	W
	4	7		2	0	4	3	5	4

Adding J 0.

*		K	M				W
*	A >I	K	M	P	R	S	W
	4 7	2	0	4	3	5	4

Adding J 0.

*				K	M				W
*	A	>I	J	K	M	P	R	S	W
	4	7	0	2	0	4	3	5	4

Adding J 0.

*				K	M				W
*	A	I	J	K	M	P	R	S	W
	4	7	0	2	0	4	3	5	4

Adding U 3.  
luck=2

\*

*				K	M				W
*	A	I	J	K	M	P	R	S	W
	4	7	0	2	0	4	3	5	4

Adding U 3.  
Add 1 level.

>\*

*				K	M				W
*	A	I	J	K	M	P	R	S	W
	4	7	0	2	0	4	3	5	4

Adding U 3.

>\*

*				K	M				W
*	A	I	J	K	M	P	R	S	W
	4	7	0	2	0	4	3	5	4

Adding U 3.



&gt;\*

U

*				K	M				W
*	A	I	J	K	M	P	R	S	W
	4	7	0	2	0	4	3	5	4

Adding U 3.

```
*
                                     U
>*
      K   M                       W
      |   |                       |
*   A   I   J   K   M   P   R   S   W
    4   7   0   2   0   4   3   5   4
```

Adding U 3.

```
*
                                     U
*
      K >M                        W
      |   |
*  A  I  J  K  M  P  R  S      W
    4  7  0  2  0  4  3  5      4
```

Adding U 3.

*										U	
*				K	>M					U	W
*	A	I	J	K	M	P	R	S			W
	4	7	0	2	0	4	3	5			4

Adding U 3.

*									U
				K	>M				U
*									W
	A	I	J	K	M	P	R	S	W
*	4	7	0	2	0	4	3	5	4

Adding U 3.

*										U	
*				K	M					U	W
*	A	I	J	K	>M	P	R	S			W
	4	7	0	2	0	4	3	5			4

Adding U 3.

*										U	
				K	M						
*										U	W
*	A	I	J	K	M	P	R	>	S		W
	4	7	0	2	0	4	3	5			4

Adding U 3.

```
*
*
*      K  M      U  W
*      |  |      |  |
*  A  I  J  K  M  P  R >S  U  W
*  4  7  0  2  0  4  3  5  3  4
```

Adding U 3.



```
*
*
*      K  M      U  W
    |   |      |   |
*  A  I  J  K  M  P  R >S  U  W
    4  7  0  2  0  4  3  5  3  4
```

Adding U 3.

```
*
*
*      K  M      U  W
*      |  |      |  |
*  A  I  J  K  M  P  R  S  U  W
*  4  7  0  2  0  4  3  5  3  4
```

Adding Z 0.  
luck=1

```
>*
      *
      *
      *  A  I  J  K  M  P  R  S  U  W
        4  7  0  2  0  4  3  5  3  4
```

Adding Z 0.

```
*
                                     >U
*                                     |
                                     U   W
*                                     |   |
*   A   I   J   K   M   P   R   S   U   W
    4   7   0   2   0   4   3   5   3   4
```

Adding Z 0.

```
*
*
*      K  M      >U  W
*      |  |      |  |
*  A  I  J  K  M  P  R  S  U  W
*  4  7  0  2  0  4  3  5  3  4
```

Adding Z 0.

```
*
*
*      K  M
*      |  |
*  A  I  J  K  M  P  R  S  U  W
*  4  7  0  2  0  4  3  5  3  4
```

Adding Z 0.

```
*
*
*      K  M
*      |  |
*  A  I  J  K  M  P  R  S  U  W
*  4  7  0  2  0  4  3  5  3  4
```

Adding Z 0.

```
*
*
*      K  M      U  W  Z
  |  |  |
*  A  I  J  K  M  P  R  S  U >W
    4  7  0  2  0  4  3  5  3  4
```

Adding Z 0.



```
*
*
*      K  M      U  W  Z
  |  |  |  |  |
*  A  I  J  K  M  P  R  S  U >W  Z
    4  7  0  2  0  4  3  5  3  4  0
```

Adding Z 0.

```
*
                                     U
*                               U   W   Z
                               |   |   |
*   A   I   J   K   M   P   R   S   U   >W   Z
    4   7   0   2   0   4   3   5   3   4   0
```

Adding Z 0.

*										U		
				K	M					U	W	Z
*	A	I	J	K	M	P	R	S		U	W	Z
	4	7	0	2	0	4	3	5		3	4	0

Adding T 6.  
luck=3

\*

\*

U

\*

K

M

U

W

Z

\*

A

I

J

K

M

P

R

S

U

W

Z

4

7

0

2

0

4

3

5

3

4

0

Adding T 6.

>\*

\*

U

\*

K

M

U

W

Z

\*

A

I

J

K

M

P

R

S

U

W

Z

4

7

0

2

0

4

3

5

3

4

0

Adding T 6.

>\*

\*

U

\*

K

M

U

W

Z

\*

A

I

J

K

M

P

R

S

U

W

Z

4

7

0

2

0

4

3

5

3

4

0

Adding T 6.

```
>*                               T
*                               U
*                               |
*                               U   W   Z
*                               |   |   |
*   A   I   J   K   M   P   R   S   U   W   Z
    4   7   0   2   0   4   3   5   3   4   0
```

Adding T 6.

```

*
                                     T
>*
                                     U
*
                                     |
                                     U   W   Z
*
                                     |   |   |
*  A   I   J   K   M   P   R   S   U   W   Z
   4   7   0   2   0   4   3   5   3   4   0
```

Adding T 6.



```
*
                                     T
>*
                                     T  U
                                     |
*                                     U  W  Z
                                     |  |  |
*  A  I  J  K  M  P  R  S          U  W  Z
   4  7  0  2  0  4  3  5          3  4  0
```

Adding T 6.

```

      *
      |
> *   T
      |
      T   U
      |
      *   K   M   U   W   Z
      |   |   |   |   |
      *   A   I   J   K   M   P   R   S   U   W   Z
      4   7   0   2   0   4   3   5   3   4   0

```

Adding T 6.















*									T			
*									T	U		
*				K	M				T	U	W	Z
*	A	I	J	K	M	P	R	>S	T	U	W	Z
	4	7	0	2	0	4	3	5	6	3	4	0

Adding T 6.





```
>*
*
*
*
*  A      I  J  K  M  P  R  S  T  U  W  Z
   4      7  0  2  0  4  3  5  6  3  4  0
```

Adding G 6.

```
>*
*
*
*
*  A      I  J  K  M  P  R  S  T  U  W  Z
   4      7  0  2  0  4  3  5  6  3  4  0
```

Adding G 6.



```

      *
      |
> *   T
      |
      |   U
      |   |
      *   T   U   W   Z
      |   |   |   |
      *   A   I   J   K   M   P   R   S   T   U   W   Z
      4       7   0   2   0   4   3   5   6   3   4   0

```

Adding G 6.

```

      *
      |
>*      G      |      T      U
      |      |      |      |
      *      K      M      T      U      W      Z
      |      |      |      |      |      |
      *      A      I      J      K      M      P      R      S      T      U      W      Z
      4      7      0      2      0      4      3      5      6      3      4      0

```

Adding G 6.



```

*
*      G
>*
      K  M
      |  |
*  A      I  J  K  M  P  R  S  T  U  W  Z
    4      7  0  2  0  4  3  5  6  3  4  0

```

Adding G 6.

```

*
*      G
>*
      K  M
      |  |
*  A      I  J  K  M  P  R  S  T  U  W  Z
    4      7  0  2  0  4  3  5  6  3  4  0

```

Adding G 6.

```

*
*      G
>*      G      K      M
          |      |
*  A      I  J  K  M  P  R  S  T  U  W  Z
    4      7  0  2  0  4  3  5  6  3  4  0

```

Adding G 6.

```

      *
      *      G
      *      |
> *      G      K      M      T      U      W      Z
      *      |      |      |      |      |      |
      *      A      I      J      K      M      P      R      S      T      U      W      Z
      *      4      7      0      2      0      4      3      5      6      3      4      0

```

Adding G 6.

```

*
*      G
*      |
*      G      K      M      T      U      W      Z
              |      |      |      |      |      |
>*  A      I  J  K  M  P  R  S  T  U  W  Z
    4      7  0  2  0  4  3  5  6  3  4  0
```

Adding G 6.

```
*
*
*
*
* >A      I  J  K  M  P  R  S  T  U  W  Z
  4      7  0  2  0  4  3  5  6  3  4  0
```

Adding G 6.

```
*
*
*
*
* >A  G  I  J  K  M  P  R  S  T  U  W  Z
   4  6  7  0  2  0  4  3  5  6  3  4  0
```

Adding G 6.

```
*
*
*
*
* >A  G  I  J  K  M  P  R  S  T  U  W  Z
  4  6  7  0  2  0  4  3  5  6  3  4  0
```

Adding G 6.



```
*
*
*
*
*  A      G  I  J  K  M  P  R  S  T  U  W  Z
   4      6  7  0  2  0  4  3  5  6  3  4  0
```

Adding F 8.  
luck=2

```
>*
*
*
*
*  A      G  I  J  K  M  P  R  S  T  U  W  Z
   4      6  7  0  2  0  4  3  5  6  3  4  0
```

Diagram illustrating a sequence of operations or a mapping between characters and numbers. The sequence is shown in a grid-like structure with columns labeled A through Z and rows labeled with numbers 4 through 0. The characters are arranged in a specific pattern, with some characters appearing multiple times (e.g., G, T, U, W, Z) and others appearing once (e.g., I, J, K, M, P, R, S).

Adding F 8.

```

> *
      T
      |
*      T      U
      |      |
*      G      U      W      Z
      |      |      |      |
      G      K      M      T      U      W      Z
      |      |      |      |      |      |      |
*  A  G  I  J  K  M  P  R  S  T  U  W  Z
    4  6  7  0  2  0  4  3  5  6  3  4  0

```

Adding F 8.

```

      *
      |
> *   G   T   U
      |   |   |
      *   G   K   M   T   U   W   Z
      |   |   |   |   |   |   |
      *   A   G   I   J   K   M   P   R   S   T   U   W   Z
          4   6   7   0   2   0   4   3   5   6   3   4   0

```

Adding F 8.

```

      *
      |
> *   G   T   U
      |   |   |
      *   G   K   M   T   U   W   Z
      |   |   |   |   |   |   |
      *   A   G   I   J   K   M   P   R   S   T   U   W   Z
          4   6   7   0   2   0   4   3   5   6   3   4   0

```

Adding F 8.

```

      *
      |
>*      F  G      |      T
      |      |      |      |
      *      G      K  M      T  U  W  Z
      |      |      |      |
      *  A    G  I  J  K  M  P  R  S  T  U  W  Z
          4    6  7  0  2  0  4  3  5  6  3  4  0

```

Adding F 8.

```

*
*      F  G
*      |
>*      G      K  M
*      |      |  |
*  A      G  I  J  K  M  P  R  S  T  U  W  Z
    4      6  7  0  2  0  4  3  5  6  3  4  0

```

Adding F 8.

```

*
*      F  G
*      |
>*      G      K  M
*      |      |  |
*  A      G  I  J  K  M  P  R  S  T  U  W  Z
    4      6  7  0  2  0  4  3  5  6  3  4  0

```

Adding F 8.



```

*
*      F  G
>*      F  G      K  M      T  U  W  Z
*      A      G  I  J  K  M  P  R  S  T  U  W  Z
      4      6  7  0  2  0  4  3  5  6  3  4  0
```

Adding F 8.

```

*
*      F  G
*      |  |
>*      F  G      K  M      T  U  W  Z
*      |  |      |  |      |  |  |  |
*  A      G  I  J  K  M  P  R  S  T  U  W  Z
    4      6  7  0  2  0  4  3  5  6  3  4  0
```

Adding F 8.

```

*
*      F  G
*      |  |
*      F  G      K  M
>*  A      G  I  J  K  M  P  R  S  T  U  W  Z
    4      6  7  0  2  0  4  3  5  6  3  4  0

```

Adding F 8.

```
*
*
*
*
* >A      F  G      K  M      T  U  W  Z
  4      6  7  0  2  0  4  3  5  6  3  4  0
```

Adding F 8.



```
*
*
*
*
* >A  F  G  I  J  K  M  P  R  S  T  U  W  Z
    4  8  6  7  0  2  0  4  3  5  6  3  4  0
```

Adding F 8.

```
*
                                     T
                                     |
*      F   G                       T   U
      |   |                       |   |
*      F   G           K           M   T   U   W   Z
      |   |           |           |   |   |   |
*  A   F   G   I   J   K   M   P   R   S   T   U   W   Z
    4   8   6   7   0   2   0   4   3   5   6   3   4   0
```

Adding L 9.  
luck=0

```
>*
*      F  G
*      |  |
*      F  G      K      M
*      |  |      |      |
*  A  F  G  I  J  K  M  P  R  S  T  U  W  Z
   4  8  6  7  0  2  0  4  3  5  6  3  4  0
```

Adding L 9.



```
>*
*      F  G
*      |  |
*      F  G      K      M
*      |  |      |      |
*  A  F  G  I  J  K  M  P  R  S  T  U  W  Z
   4  8  6  7  0  2  0  4  3  5  6  3  4  0
```

Adding L 9.

```

*
>*      F  G      T
      |  |      |
*      F  G      T  U
      |  |      |  |
*  A  F  G  I  J  K      M  P  R  S  T  U  W  Z
    4  8  6  7  0  2      0  4  3  5  6  3  4  0
```

Adding L 9.











```
*
*
*
*
*  A      F  G  I  J  K  L  M  P  R  S  T  U  W  Z
   4      8  6  7  0  2  9  0  4  3  5  6  3  4  0

      T
      |
      T  U
      |  |
      T  U  W  Z
      |  |  |  |
      T  U  W  Z
      |  |  |  |
      6  3  4  0
```

Adding C 1.

luck=1



```
>*
*
*
*
*  A      F  G  I  J  K  L  M  P  R  S  T  U  W  Z
   4      8  6  7  0  2  9  0  4  3  5  6  3  4  0

      T
      |
      T  U
      |  |
      T  U  W  Z
      |  |  |  |
      T  U  W  Z
```

Adding C 1.

> *											T				
*		F	G								T	U			
*		F	G			K		M			T	U	W	Z	
*	A	F	G	I	J	K	L	M	P	R	S	T	U	W	Z
	4	8	6	7	0	2	9	0	4	3	5	6	3	4	0

Adding C 1.



```
*
>*
*
*  A      F  G  I  J  K  L  M  P  R  S  T  U  W  Z
   4      8  6  7  0  2  9  0  4  3  5  6  3  4  0

      T
      |
      T  U
      |  |
      T  U  W  Z
      |  |  |  |
      T  U  W  Z
      |  |  |  |
      6  3  4  0
```

Adding C 1.

```
*
*
>*
*  A      F  G  I  J  K  L  M  P  R  S  T  U  W  Z
   4      8  6  7  0  2  9  0  4  3  5  6  3  4  0

      |      |
      F  G
      |  |
      F  G      K      M      T  U  W  Z
      |  |      |  |      |  |  |  |
      F  G  I  J  K  L  M  P  R  S  T  U  W  Z
      |  |  |  |  |  |  |  |  |  |  |  |  |  |
      4  8  6  7  0  2  9  0  4  3  5  6  3  4  0
```

Adding C 1.

```
*
*
>*
*  A      F  G  I  J  K  L  M  P  R  S  T  U  W  Z
   4      8  6  7  0  2  9  0  4  3  5  6  3  4  0

      |      |
      F  G
      |  |
      F  G      K      M      T  U  W  Z
      |  |      |  |      |  |  |  |
      F  G  I  J  K  L  M  P  R  S  T  U  W  Z
      |  |  |  |  |  |  |  |  |  |  |  |  |  |
      4  8  6  7  0  2  9  0  4  3  5  6  3  4  0
```

Adding C 1.

```
*
*
>*      C      F      G      K      M      T      U      W      Z
      |      |      |      |      |      |      |      |
*      A      F      G      I      J      K      L      M      P      R      S      T      U      W      Z
      4      8      6      7      0      2      9      0      4      3      5      6      3      4      0
```

Adding C 1.

```
*
*
*      C      F      G      K      M      T      U      W      Z
>*  A      F      G      I      J      K      L      M      P      R      S      T      U      W      Z
    4      8      6      7      0      2      9      0      4      3      5      6      3      4      0
```

Adding C 1.



```
*
*
*      F  G
*      |  |
*      C  F  G      K      M      T  U  W  Z
*      |  |      |      |      |  |  |  |
*  >A  F  G  I  J  K  L  M  P  R  S  T  U  W  Z
*      4      8  6  7  0  2  9  0  4  3  5  6  3  4  0
```

Adding C 1.

```
*
*
*      F  G
*      |  |
*      C  F  G      K      M      T  U  W  Z
*      |  |      |  |      |  |  |  |
* >A  C  F  G  I  J  K  L  M  P  R  S  T  U  W  Z
*    4  1  8  6  7  0  2  9  0  4  3  5  6  3  4  0
```

Adding C 1.

```
*
*
*      F  G
*      |  |
*      C  F  G      K      M      T  U  W  Z
*      |  |  |      |      |      |  |  |  |
* >A  C  F  G  I  J  K  L  M  P  R  S  T  U  W  Z
*    4  1  8  6  7  0  2  9  0  4  3  5  6  3  4  0
```

Adding C 1.

```
*
*
*      F  G
*      |  |
*      C  F  G      K      M
*      |  |  |      |      |
*  A  C  F  G  I  J  K  L  M      P  R  S  T  U  W  Z
*  4  1  8  6  7  0  2  9  0      4  3  5  6  3  4  0
```

Adding O 8.  
luck=4

\*

\*

\*

\*

\*

			F	G									T			
														U		
		C	F	G			K		M				T	U	W	Z
A	C	F	G	I	J	K	L	M		P	R	S	T	U	W	Z
4	1	8	6	7	0	2	9	0		4	3	5	6	3	4	0

Adding O 8.

&gt;\*

\*

\*

\*

\*

			F	G									T				
															U		
		C	F	G			K		M				T	U	W	Z	
A	C	F	G	I	J	K	L	M		P	R	S	T	U	W	Z	
4	1	8	6	7	0	2	9	0		4	3	5	6	3	4	0	

Adding O 8.

>\*

\*

\*

\*

\*

			F	G									T				
															U		
		C	F	G			K		M				T	U	W	Z	
A	C	F	G	I	J	K	L	M		P	R	S	T	U	W	Z	
4	1	8	6	7	0	2	9	0		4	3	5	6	3	4	0	

Adding O 8.

&gt;\*

O

\*

T

\*

F

G

T

U

\*

C

F

G

K

M

T

U

W

Z

\*

A

C

F

G

I

J

K

L

M

P

R

S

T

U

W

Z

4

1

8

6

7

0

2

9

0

4

3

5

6

3

4

0

Adding O 8.



```
*
                                     O
>*
                                     T
                                     |
*                                     T   U
                                     |   |
*      C   F   G                   T   U   W   Z
      |   |   |                   |   |   |   |
*      A   C   F   G   I   J   K   L   M   P   R   S   T   U   W   Z
      4   1   8   6   7   0   2   9   0   4   3   5   6   3   4   0
```

Adding O 8.

```
*
                                     O
>*
                                     T
                                     |
*                                     T   U
                                     |   |
*      C   F   G                   T   U   W   Z
      |   |   |                   |   |   |   |
*      A   C   F   G   I   J   K   L   M   P   R   S   T   U   W   Z
      4   1   8   6   7   0   2   9   0   4   3   5   6   3   4   0
```

Adding O 8.

```
*                               O
>*                               O           T
*                               |           |
*                               T           U
*                               |           |
*       C       F       G       K       M       T       U       W       Z
*       |       |       |       |       |       |       |       |
*   A   C   F   G   I   J   K   L   M   P   R   S   T   U   W   Z
*   4   1   8   6   7   0   2   9   0   4   3   5   6   3   4   0
```

Adding O 8.

































```
>*
*
*
*
*
*
A      C      F      G      I      J      K      L      M      O      P      R      S      T      U      W      Z
4      1      8      6      7      0      2      9      0      8      4      3      5      6      3      4      0
```

Adding B 3.

```
>*
*
*
*
*
*
A
4
C
1
F
8
G
6
I
7
J
0
K
2
L
9
M
0
O
8
P
4
R
3
S
5
T
6
U
3
W
4
Z
0
```

Adding B 3.

```
*
>*
*
*
*
*
A
4
C
1
F
8
G
6
I
7
J
0
K
2
L
9
M
0
O
8
P
4
R
3
S
5
T
6
U
3
W
4
Z
0
```

Adding B 3.

```
*
>*
*
*
*
*
A
4
C
1
C
1
F
8
F
8
G
6
G
6
I
7
J
0
K
2
L
9
M
0
M
0
O
8
O
8
P
4
R
3
S
5
T
6
T
3
U
3
U
3
W
4
W
4
Z
0
Z
0
```

Adding B 3.

```
*
>*      B
*
*      F  G
*      |  |
*      C  F  G      K      M  O      T  U      W  Z
*      |  |  |      |  |  |  |  |  |  |  |
*  A  C  F  G  I  J  K  L  M  O  P  R  S  T  U  W  Z
    4  1  8  6  7  0  2  9  0  8  4  3  5  6  3  4  0
```

Adding B 3.

```
*
*      B
>*      F  G
*      C  F  G      K      M  O      T  U      W  Z
*      |  |  |      |      |      |  |  |  |
*  A  C  F  G  I  J  K  L  M  O  P  R  S  T  U  W  Z
    4  1  8  6  7  0  2  9  0  8  4  3  5  6  3  4  0
```

Adding B 3.

```
*
*      B
>*      F  G
*      C  F  G      K      M  O      T  U      W  Z
*      |  |  |      |      |      |  |      |  |
*  A  C  F  G  I  J  K  L  M  O  P  R  S  T  U  W  Z
    4  1  8  6  7  0  2  9  0  8  4  3  5  6  3  4  0
```

Adding B 3.



```
*
*      B
>*      B      F      G
*      C      F      G      K      M      O      T      U      W      Z
*      A      C      F      G      I      J      K      L      M      O      P      R      S      T      U      W      Z
      4      1      8      6      7      0      2      9      0      8      4      3      5      6      3      4      0
```

Adding B 3.











*									O								
*		B							O				T				
*																	
*		B		F	G				O			T	U				
*																	
*		B	C	F	G		K		O			T	U	W	Z		
*	>A	C	F	G	I	J	K	L	O	P	R	S	T	U	W	Z	
	4	1	8	6	7	0	2	9	0	8	4	3	5	6	3	4	0

Adding B 3.





```
*
*
*
*
*
* >A  B  C  F  G  I  J  K  L  M  O  P  R  S  T  U  W  Z
  4  3  1  8  6  7  0  2  9  0  8  4  3  5  6  3  4  0
```

Adding B 3.

