6. Statistics for Hashing Simulation

```
THE DIVISION HASH METHOD IS APPLIED TO
THE 1024 GENERALLY CHOSEN NAMES DATA.
MEAN SQUARE DEVIATION :
                     8.23
O KEYS BUCKET = 22 : ****************
3 KEYS BUCKET = 35 : *****************************
8 KEYS BUCKET = 8 : ******
9 KEYS BUCKET = 5 : +++++
10 KEYS BUCKET = 4 : ****
11 KEYS BUCKET = 4 : ****
12 KEYS BUCKET = 3 : ***
13 KEYS BUCKET = 1 : *
14 KEYS BUCKET = 1 : *
15 KEYS BUCKET = 0 :
16 KEYS BUCKET = 0 :
17 KEYS BUCKET = 0 :
18 KEYS BUCKET = 0 :
19 KEYS BUCKET = 0 :
20 KEYS BUCKET = 0 :
21 KEYS BUCKET = O :
22 KEYS BUCKET = O :
23 KEYS BUCKET = 0 :
24 KEYS BUCKET = 0 :
25 KEYS BUCKET = O :
26 KEYS BUCKET = O :
27 KEYS BUCKET = O :
28 KEYS BUCKET = O :
29 KEYS BUCKET = 0 :
30 KEYS BUCKET = 0 :
31 KEYS BUCKET = 0 :
32 KEYS BUCKET = 0 :
33 KEYS BUCKET = 0 :
34 KEYS BUCKET = 0 :
35 KEYS BUCKET = 0 :
36 KEYS BUCKET = 0 :
37 KEYS BUCKET = O :
38 KEYS BUCKET = 0 :
39 KEYS BUCKET = 0 :
40 KEYS BUCKET = 0 :
```

OVER 40 KEYS BUCKET

= O :

```
THE DIVISION HASH METHOD IS APPLIED TO
THE 1024 GENERALLY CHOSEN NAMES DATA.
MEAN SQUARE DEVIATION :
                       20.20
***********
1 KEYS BUCKET = 0 :
2 KEYS BUCKET = 0 :
3 KEYS BUCKET = 3 : ***
4 KEYS BUCKET = 6 : ******
5 KEYS BUCKET = 14 : **********
6 KEYS BUCKET = 20 : *************
7 KEYS BUCKET = 18 : ************
 8 KEYS BUCKET = 19 : *************
 9 KEYS BUCKET = 17 : ************
10 KEYS BUCKET = 7 : ******
11 KEYS BUCKET = 9 : *******
12 KEYS BUCKET = 8 : *******
13 KEYS BUCKET = 4 : ****
14 KEYS BUCKET = 1 : *
15 KEYS BUCKET = 0 :
16 KEYS BUCKET = 1 : *
17 KEYS BUCKET = 0 :
18 KEYS BUCKET = O:
19 KEYS BUCKET = 0 :
20 KEYS BUCKET = 0 :
21 KEYS BUCKET = 0 :
22 KEYS BUCKET = 0 :
23 KEYS BUCKET = 1 : *
24 KEYS BUCKET = O :
25 KEYS BUCKET = 0 :
26 KEYS BUCKET = 0 :
27 KEYS BUCKET = 0 :
28 KEYS BUCKET = 0 :
29 KEYS BUCKET = 0 :
30 KEYS BUCKET = 0 :
31 KEYS BUCKET = 0 :
32 KEYS BUCKET = O :
33 KEYS BUCKET = 0 :
34 KEYS BUCKET = 0 :
35 KEYS BUCKET = 0 :
36 KEYS BUCKET = 0 :
37 KEYS BUCKET = 0 :
38 KEYS BUCKET = O :
39 KEYS BUCKET = 0 :
40 KEYS BUCKET = 0 :
```

•

OVER 40 KEYS BUCKET

= O :

```
----- STATISTICS >----
THE DIVISION HASH METHOD IS APPLIED TO
THE 1024 GENERALLY CHOSEN NAMES DATA.
MEAN SQUARE DEVIATION :
                          11.95
 O KEYS BUCKET = 43 : ******************************
 1 KEYS BUCKET = 32 : **********************
 2 KEYS BUCKET = 28 : *******************
 3 KEYS BUCKET = 24 : ****************
 4 KEYS BUCKET = 31 : **********************
 5 KEYS BUCKET = 25 : *****************
 6 KEYS BUCKET = 16 : **********
 7 KEYS BUCKET = 18 : *************
 8 KEYS BUCKET = 10 : *******
 9 KEYS BUCKET = 12 : *********
10 KEYS BUCKET = 4 : ****
11 KEYS BUCKET = 7 : ******
12 KEYS BUCKET = 1 : *
13 KEYS BUCKET = 2 : **
14 KEYS BUCKET = 2 : **
15 KEYS BUCKET = 0 :
16 KEYS BUCKET = 0 :
17 KEYS BUCKET = 0 :
18 KEYS BUCKET = 0 :
19 KEYS BUCKET = 0 :
20 KEYS BUCKET = 0 :
21 KEYS BUCKET = 0 :
22 KEYS BUCKET = 1 : *
23 KEYS BUCKET = 0 :
24 KEYS BUCKET = 0 :
25 KEYS BUCKET = 0 :
26 KEYS BUCKET = 0 :
27 KEYS BUCKET = 0 :
28 KEYS BUCKET = 0 :
29 KEYS BUCKET = 0 :
30 KEYS BUCKET = 0 :
31 KEYS BUCKET = 0 :
32 KEYS BUCKET = 0 :
33 KEYS BUCKET = 0 :
34 KEYS BUCKET = 0 :
35 KEYS BUCKET = 0 :
36 KEYS BUCKET = 0 :
37 KEYS BUCKET = 0 :
38 KEYS BUCKET = 0 :
39 KEYS BUCKET = 0 :
40 KEYS BUCKET = 0 :
OVER 40 KEYS BUCKET
             = 0 :
```

```
----- STATISTICS >----
THE DIVISION HASH METHOD IS APPLIED TO
THE 1024 GENERALLY CHOSEN NAMES DATA.
MEAN SQUARE DEVIATION :
                          6.60
O KEYS BUCKET = 13 : *********
1 KEYS BUCKET = 26 : ****************
3 KEYS BUCKET = 39 : ***************************
4 KEYS BUCKET = 37 : ************************
5 KEYS BUCKET = 33 : *************************
6 KEYS BUCKET = 23 : **************
7 KEYS BUCKET = 13 : ++++++++++
8 KEYS BUCKET = 10 : ********
9 KEYS BUCKET = 9 : *******
10 KEYS BUCKET = 4 : ****
11 KEYS BUCKET = 1 : *
12 KEYS BUCKET = 2 : **
13 KEYS BUCKET = 1 : *
14 KEYS BUCKET = 0 :
15 KEYS BUCKET = O :
16 KEYS BUCKET = 0 :
17 KEYS BUCKET = 0 :
18 KEYS BUCKET = 0 :
19 KEYS BUCKET = 0 :
20 KEYS BUCKET = 0 :
21 KEYS BUCKET = 0 :
22 KEYS BUCKET = 0 :
23 KEYS BUCKET = 0 :
24 KEYS BUCKET = 0 :
25 KEYS BUCKET = 0 :
26 KEYS BUCKET = 0 :
27 KEYS BUCKET = 0 :
28 KEYS BUCKET = 0 :
29 KEYS BUCKET = 0 :
30 KEYS BUCKET = 0 :
31 KEYS BUCKET = 0 :
32 KEYS BUCKET = 0 :
33 KEYS BUCKET = 0 :
34 KEYS BUCKET = 0 :
35 KEYS BUCKET = 0 :
36 KEYS BUCKET = 0 :
37 KEYS BUCKET = 0 :
38 KEYS BUCKET = 0 :
39 KEYS BUCKET = 0 :
40 KEYS BUCKET = 0 :
```

١.

OVER 40 KEYS BUCKET

≃ O :

```
THE DIVISION HASH METHOD IS APPLIED TO
THE 1024 GENERALLY CHOSEN NAMES DATA.
MEAN SQUARE DEVIATION :
O KEYS BUCKET = 5 : *****
6 KEYS BUCKET = 23 : '''''
7 KEYS BUCKET = 17 : +++++++++++++
8 KEYS BUCKET = 6 : +++++
9 KEYS BUCKET = 4 : ++++
10 KEYS BUCKET = 1 : 1
11 KEYS BUCKET = 3 : !!!
12 KEYS BUCKET = 0 :
13 KEYS BUCKET = 0 :
14 KEYS BUCKET = 0 :
15 KEYS BUCKET = O :
16 KEYS BUCKET = 0 :
17 KEYS BUCKET = O :
18 KEYS BUCKET = O :
19 KEYS BUCKET = 0 :
20 KEYS BUCKET = 0 :
21 KEYS BUCKET = 0 :
22 KEYS BUCKET = 0 :
23 KEYS BUCKET = 0 :
24 KEYS BUCKET = 0 :
25 KEYS BUCKET = 0 :
26 KEYS BUCKET = 0 :
27 KEYS BUCKET = 0 :
28 KEYS BUCKET = 0 :
29 KEYS BUCKET = O :
30 KEYS BUCKET = 0 :
31 KEYS BUCKET = 0 :
32 KEYS BUCKET = 0 :
33 KEYS BUCKET = 0 :
34 KEYS BUCKET = 0 :
35 KEYS BUCKET = 0 :
36 KEYS BUCKET = 0 :
37 KEYS BUCKET = 0 :
38 KEYS BUCKET = O :
39 KEYS BUCKET = O :
40 KEYS BUCKET = 0 :
OVER 40 KEYS BUCKET
```

```
THE DIVISION HASH METHOD IS APPLIED TO
THE 1024 GENERALLY CHOSEN NAMES DATA.
MEAN SQUARE DEVIATION :
O KEYS BUCKET = 7 : ******
1 KEYS BUCKET = 13 : **********
2 KEYS BUCKET = 33 : ****************************
8 KEYS BUCKET = 3 : ***
9 KEYS BUCKET = 2 : 1+
10 KEYS BUCKET = 1 : *
11 KEYS BUCKET = O :
12 KEYS BUCKET = 1 : *
13 KEYS BUCKET = 1 : *
14 KEYS BUCKET = 0 :
15 KEYS BUCKET = 1 : +
16 KEYS BUCKET = 0 :
17 KEYS BUCKET = 0 :
18 KEYS BUCKET = O :
19 KEYS BUCKET = 0 :
20 KEYS BUCKET = 0 :
21 KEYS BUCKET = 0 :
22 KEYS BUCKET = 0 :
23 KEYS BUCKET = 0 :
24 KEYS BUCKET = 0 :
25 KEYS BUCKET = 0 :
26 KEYS BUCKET = 0 :
27 KEYS BUCKET = 0 :
28 KEYS BUCKET = 0 :
29 KEYS BUCKET = 0 :
30 KEYS BUCKET = 0 :
31 KEYS BUCKET = 0 :
32 KEYS BUCKET = 0 :
33 KEYS BUCKET = 0 :
34 KEYS BUCKET = 0 :
35 KEYS BUCKET = 0 :
36 KEYS BUCKET = 0 :
37 KEYS BUCKET = 0 :
38 KEYS BUCKET = O :
39 KEYS BUCKET = 0 :
JO KEYS BUCKET = 0 :
OVER 40 KEYS BUCKET
```

4

= 0 ;

```
----- STATISTICS >-----
THE DIVISION HASH METHOD IS APPLIED TO
THE 1024 RANDOMLY CHOSEN NAMES DATA.
MEAN SQUARE DEVIATION :
                          5.77
O KEYS BUCKET = 12 : *********
 1 KEYS BUCKET = 24 : *****************
2 KEYS BUCKET = 40 : **************************
3 KEYS BUCKET = 41 : ****************************
4 KEYS BUCKET = 43 : *****************************
5 KEYS BUCKET = 33 : *******************
7 KEYS BUCKET = 17 : ***********
8 KEYS BUCKET = 9 : ********
9 KEYS BUCKET = 6 : *****
10 KEYS BUCKET = 3 : ***
11 KEYS BUCKET = 2 : **
12 KEYS BUCKET = O :
13 KEYS BUCKET = 1 : +
14 KEYS BUCKET = O :
15 KEYS BUCKET = 0 :
16 KEYS BUCKET = 0 :
17 KEYS BUCKET = O :
18 KEYS BUCKET = 0 :
19 KEYS BUCKET = O :
20 KEYS BUCKET = 0 :
21 KEYS BUCKET = 0 :
22 KEYS BUCKET = 0 :
23 KEYS BUCKET = 0 :
24 KEYS BUCKET = 0 :
25 KEYS BUCKET = O :
26 KEYS BUCKET = 0 :
27 KEYS BUCKET = O :
28 KEYS BUCKET = O :
29 KEYS BUCKET = 0 :
30 KEYS BUCKET = 0 :
31 KEYS BUCKET = O :
32 KEYS BUCKET = 0 :
33 KEYS BUCKET = 0 :
34 KEYS BUCKET = 0 :
35 KEYS BUCKET = 0 :
36 KEYS BUCKET = 0 :
37 KEYS BUCKET = 0 :
38 KEYS BUCKET = 0 :
39 KEYS BUCKET = 0 :
40 KEYS BUCKET = 0 :
OVER 40 KEYS BUCKET
             = O :
```

```
----- STATISTICS >-----
```

THE DIVISION HASH METHOD IS APPLIED TO

THE 1024 RANDOMLY CHOSEN NAMES DATA.

MEAN SQUARE DEVIATION: 25.63

```
*******
1 KEYS BUCKET = 3 : ***
2 KEYS BUCKET = 6 : *****
3 KEYS BUCKET = 9 : *******
4 KEYS BUCKET = 10 : *******
5 KEYS BUCKET = 12 : *********
6 KEYS BUCKET = 12 : *********
7 KEYS BUCKET = 11 : ********
8 KEYS BUCKET = 14 : **********
9 KEYS BUCKET = 8 : ******
10 KEYS BUCKET = 9 : *******
11 KEYS BUCKET = 7 : ******
12 KEYS BUCKET = 5 : *****
13 KEYS BUCKET = 7 : ******
14 KEYS BUCKET = 4 : ****
15 KEYS BUCKET = 2 : **
16 KEYS BUCKET = 4 : ****
17 KEYS BUCKET = 1 : *
18 KEYS BUCKET = O :
19 KEYS BUCKET = 1 : *
20 KEYS BUCKET = 0 :
21 KEYS BUCKET = 1 : *
22 KEYS BUCKET = O :
23 KEYS BUCKET = O :
24 KEYS BUCKET = 1 : *
25 KEYS BUCKET = O :
26 KEYS BUCKET = 0 :
27 KEYS BUCKET = O :
28 KEYS BUCKET = O :
29 KEYS BUCKET = O :
30 KEYS BUCKET = 0 :
31 KEYS BUCKET = 0 :
32 KEYS BUCKET = 0 :
33 KEYS BUCKET = 0 :
34 KEYS BUCKET = 0 :
35 KEYS BUCKET = 0 :
36 KEYS BUCKET = 0 :
37 KEYS BUCKET = 0 :
38 KEYS BUCKET = O :
39 KEYS BUCKET = 0 :
40 KEYS BUCKET = 0 :
```

OVER 40 KEYS BUCKET = 0 :

2 KEYS BUCKET = 6 : ***** 3 KEYS BUCKET = 9 : ******* 4 KEYS BUCKET = 10 : ******** 5 KEYS BUCKET = 12 : ******** 6 KEYS BUCKET = 12 : ********* 7 KEYS BUCKET = 11 : ******** 8 KEYS BUCKET = 14 : ********** 9 KEYS BUCKET = 8 : ******* 10 KEYS BUCKET = 9 : ******* 11 KEYS BUCKET = 7 : ****** 12 KEYS BUCKET = 5 : ***** 13 KEYS BUCKET = 7 : ****** 14 KEYS BUCKET = 4 : **** 15 KEYS BUCKET = 2 : ** 16 KEYS BUCKET = 4 : **** 17 KEYS BUCKET = 1 : * 18 KEYS BUCKET = 0 : 19 KEYS BUCKET = 1 : * 20 KEYS BUCKET = 0 : 21 KEYS BUCKET = 1 : * 22 KEYS BUCKET = 0 : 23 KEYS BUCKET = 0 : 24 KEYS BUCKET = 1 : * 25 KEYS BUCKET = 0 : 26 KEYS BUCKET = 0 : 27 KEYS BUCKET = 0 : 28 KEYS BUCKET = 0 : 29 KEYS BUCKET = O : 30 KEYS BUCKET = 0 : 31 KEYS BUCKET = 0 : 32 KEYS BUCKET = 0 : 33 KEYS BUCKET = 0 : 34 KEYS BUCKET = 0 : 35 KEYS BUCKET = 0 : 36 KEYS BUCKET = 0 : 37 KEYS BUCKET = 0 : 38 KEYS BUCKET = 0 : 39 KEYS BUCKET = 0 : 40 KEYS BUCKET = 0 :

OVER 40 KEYS BUCKET = 0 :

```
----< STATISTICS >-----
THE DIVISION HASH METHOD IS APPLIED TO
THE 1024 RANDOMLY CHOSEN NAMES DATA.
MEAN SQUARE DEVIATION :
                         4.71
O KEYS BUCKET = 3 : ***
1 KEYS BUCKET = 27 : *******************
2 KEYS BUCKET = 41 : *******************************
4 KEYS BUCKET = 38 : ***************************
5 KEYS BUCKET = 43 : *****************************
6 KEYS BUCKET = 31 : ********************
7 KEYS BUCKET = 17 : ************
8 KEYS BUCKET = 6 : *****
9 KEYS BUCKET = 3 : ***
10 KEYS BUCKET = 2 : **
11 KEYS BUCKET = 0 :
12 KEYS BUCKET = 0 :
13 KEYS BUCKET = 0 :
14 KEYS BUCKET = 0 :
15 KEYS BUCKET = 0 :
16 KEYS BUCKET = 1 : *
17 KEYS BUCKET = 0 :
18 KEYS BUCKET = 0 :
19 KEYS BUCKET = 0 :
20 KEYS BUCKET = 0 :
21 KEYS BUCKET = 0 :
22 KEYS BUCKET = 0 :
23 KEYS BUCKET = 0 :
24 KEYS BUCKET = 0 :
25 KEYS BUCKET = 0 :
26 KEYS BUCKET = 0 :
27 KEYS BUCKET = 0 :
28 KEYS BUCKET = 0 :
29 KEYS BUCKET = 0 :
30 KEYS BUCKET = 0 :
31 KEYS BUCKET = 0 :
32 KEYS BUCKET = 0 :
33 KEYS BUCKET = 0 :
34 KEYS BUCKET = 0 :
35 KEYS BUCKET = 0 :
36 KEYS BUCKET = 0 :
37 KEYS BUCKET = 0 :
38 KEYS BUCKET = 0 :
39 KEYS BUCKET = 0 :
40 KEYS BUCKET = 0 :
```

٠,

OVER 40 KEYS BUCKET

≂ O :

```
THE DIVISION HASH METHOD IS APPLIED TO
THE 1024 RANDOMLY CHOSEN NAMES DATA
MEAN SQUARE DEVIATION :
                        5.67
O KEYS BUCKET = 13 : *********
2 KEYS BUCKET = 38 : *****************************
3 KEYS BUCKET = 39 : *****************************
6 KEYS BUCKET = 30 : **********************
7 KEYS BUCKET = 12 : +++++++++
 8 KEYS BUCKET = 10 : *******
9 KEYS BUCKET = 5 : +++++
10 KEYS BUCKET = 3 : +++
11 KEYS BUCKET = 2 : **
12 KEYS BUCKET = 0 :
13 KEYS BUCKET = 1 : 1
14 KEYS BUCKET = O :
15 KEYS BUCKET = 0 :
16 KEYS BUCKET = 0 :
17 KEYS BUCKET = 0 :
18 KEYS BUCKET = 0 :
19 KEYS BUCKET = 0 :
20 KEYS BUCKET = 0 :
21 KEYS BUCKET = 0 :
22 KEYS BUCKET = 0 :
23 KEYS BUCKET = 0 :
24 KEYS BUCKET = O :
25 KEYS BUCKET = 0 :
26 KEYS BUCKET = 0 :
27 KEYS BUCKET = 0 :
28 KEYS BUCKET = 0 :
29 KEYS BUCKET = 0 :
30 KEYS BUCKET = 0 :
31 KEYS BUCKET = 0 :
32 KEYS BUCKET = 0 :
33 KEYS BUCKET = 0 :
34 KEYS BUCKET = 0 :
35 KEYS BUCKET = 0 :
36 KEYS BUCKET = 0 :
37 KEYS BUCKET = 0 :
38 KEYS BUCKET = 0 :
39 KEYS BUCKET = 0 :
40 KEYS BUCKET = 0 :
OVER 40 KEYS BUCKET
             = 0 :
```

```
----< STATISTICS >------
THE DIVISION HASH METHOD IS APPLIED TO
THE 1024 RANDOMLY CHOSEN NAMES DATA.
MEAN SQUARE DEVIATION :
                       4.59
O KEYS BUCKET = 2 : **
1 KEYS BUCKET = 25 : ******************
5 KEYS BUCKET = 36 : ****************************
6 KEYS BUCKET = 23 : ****************
7 KEYS BUCKET = 18 : ************
8 KEYS BUCKET = 8 : *******
9 KEYS BUCKET = 2 : **
10 KEYS BUCKET = 3 : ***
11 KEYS BUCKET = 1 : *
12 KEYS BUCKET = 0 :
13 KEYS BUCKET = 1 : *
14 KEYS BUCKET = 0 :
15 KEYS BUCKET = 0 :
16 KEYS BUCKET = 0 :
17 KEYS BUCKET = 0 :
18 KEYS BUCKET = 0 :
19 KEYS BUCKET = 0 :
20 KEYS BUCKET = 0 :
21 KEYS BUCKET = 0 :
22 KEYS BUCKET = 0 :
23 KEYS BUCKET = 0 :
24 KEYS BUCKET = 0 :
25 KEYS BUCKET = 0 :
26 KEYS BUCKET = 0 ·
27 KEYS BUCKET = 0 :
28 KEYS BUCKET = 0 :
29 KEYS BUCKET = 0 :
30 KEYS BUCKET = 0 :
31 KEYS BUCKET = 0 :
32 KEYS BUCKET = 0 :
33 KEYS BUCKET = 0 :
34 KEYS BUCKET = 0 :
35 KEYS BUCKET = 0 :
36 KEYS BUCKET = 0 .
37 KEYS BUCKET = 0 :
38 KEYS BUCKET = 0 :
39 KEYS BUCKET = 0 :
```

OVER 40 KEYS BUCKET

٤

40 KEYS BUCKET = 0 :

= O:

```
----- STATISTICS >-----
THE DIVISION HASH METHOD IS APPLIED TO
THE 1024 RANDOMLY CHOSEN NAMES DATA.
MEAN SQUARE DEVIATION :
O KEYS BUCKET = 5 : *****
1 KEYS BUCKET = 18 : **********
6 KEYS BUCKET = 19 : ************
7 KEYS BUCKET = 13 : *********
8 KEYS BUCKET = 11 : ********
9 KEYS BUCKET = 7 : ++++*+
10 KEYS BUCKET = 2 : **
11 KEYS BUCKET = 1 : 1
12 KEYS BUCKET = 1 : +
13 KEYS BUCKET = 0 :
14 KEYS BUCKET = 0 :
15 KEYS BUCKET = 0 :
16 KEYS BUCKET = 0 :
17 KEYS BUCKET = O :
18 KEYS BUCKET = 0 :
19 KEYS BUCKET = 0 :
20 KEYS BUCKET = 0 :
21 KEYS BUCKET = O :
22 KEYS BUCKET = 0 :
23 KEYS BUCKET = 0 :
24 KEYS BUCKET = 0 :
25 KEYS BUCKET = 0 :
26 KEYS BUCKET = 0 :
27 KEYS BUCKET = 0 :
28 KEYS BUCKET = 0 :
29 KEYS BUCKET = 0 :
30 KEYS BUCKET = 0 :
31 KEYS BUCKET = 0 :
32 KEYS BUCKET = 0 :
33 KEYS BUCKET = 0 :
34 KEYS BUCKET = 0 :
35 KEYS BUCKET = 0 :
36 KEYS BUCKET = 0 :
37 KEYS BUCKET = 0 :
38 KEYS BUCKET = 0 :
39 KEYS BUCKET = 0 :
40 KEYS BUCKET = 0 :
```

٠.

OVER 40 KEYS BUCKET

```
----- STATISTICS >-----
THE DIVISION HASH METHOD IS APPLIED TO
THE 1024 NUMERIC STRINGS DATA.
MEAN SQUARE DEVIATION :
                        4.68
O KEYS BUCKET = 6 : *****
 1 KEYS BUCKET = 19 : *************
 2 KEYS BUCKET = 33 : ***********************
 5 KEYS BUCKET = 43 : *********************************
 6 KEYS BUCKET = 21 : **************
 7 KEYS BUCKET = 12 : *********
 8 KEYS BUCKET = 6 : *****
9 KEYS BUCKET = 4 : ****
10 KEYS BUCKET = 0 :
11 KEYS BUCKET = 1 : *
12 KEYS BUCKET = 1 : *
13 KEYS BUCKET = 1 : *
14 KEYS BUCKET = O :
15 KEYS BUCKET = 1 : *
16 KEYS BUCKET = 0 :
17 KEYS BUCKET = 0 :
18 KEYS BUCKET = O :
19 KEYS BUCKET = 0 :
20 KEYS BUCKET = 0 :
21 KEYS BUCKET = O :
22 KEYS BUCKET = O :
23 KEYS BUCKET = 0 :
24 KEYS BUCKET = O :
25 KEYS BUCKET = 0 :
26 KEYS BUCKET = 0 :
27 KEYS BUCKET = 0 :
28 KEYS BUCKET = O :
29 KEYS BUCKET = 0 :
30 KEYS BUCKET = 0 :
31 KEYS BUCKET = 0 :
32 KEYS BUCKET = O :
33 KEYS BUCKET = 0 :
34 KEYS BUCKET = 0 :
35 KEYS BUCKET = O :
36 KEYS BUCKET = 0 :
37 KEYS BUCKET = 0 :
38 KEYS BUCKET = 0 :
39 KEYS BUCKET = 0 :
40 KEYS BUCKET = 0 :
OVER 40 KEYS BUCKET
```

4

```
----- STATISTICS >-----
THE ALGEBRAIC CODING HASH METHOD IS APPLIED TO
THE 1024 RANDOMLY CHOSEN NAMES DATA.
MEAN SQUARE DEVIATION :
                        4.41
O KEYS BUCKET = 5 : *****
1 KEYS BUCKET = 18 : ************
2 KEYS BUCKET = 41 : ******************************
5 KEYS BUCKET = 31 : **********************
6 KEYS BUCKET = 26 : ****************
7 KEYS BUCKET = 18 : ************
8 KEYS BUCKET = 6 : *****
9 KEYS BUCKET = 7 : ******
10 KEYS BUCKET = 1 : *
11 KEYS BUCKET = 0 :
12 KEYS BUCKET = 1 : *
13 KEYS BUCKET = 0 :
14 KEYS BUCKET = 0 :
15 KEYS BUCKET = 0 :
16 KEYS BUCKET = O :
17 KEYS BUCKET = 0 :
18 KEYS BUCKET = O :
19 KEYS BUCKET = 0 :
20 KEYS BUCKET = 0 :
21 KEYS BUCKET = O :
22 KEYS BUCKET = 0 :
23 KEYS BUCKET = 0 :
24 KEYS BUCKET = 0 :
25 KEYS BUCKET = 0 :
26 KEYS BUCKET = 0 :
27 KEYS BUCKET = 0 :
28 KEYS BUCKET = O :
29 KEYS BUCKET = 0 :
30 KEYS BUCKET = 0 :
31 KEYS BUCKET = 0 :
32 KEYS BUCKET = 0 :
33 KEYS BUCKET = 0 :
34 KEYS BUCKET = 0 :
35 KEYS BUCKET = 0 :
36 KEYS BUCKET = 0 :
37 KEYS BUCKET = 0 :
38 KEYS BUCKET = 0 :
39 KEYS BUCKET = 0 :
40 KEYS BUCKET = 0 :
OVER 40 KEYS BUCKET
```

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THE DIVISION HASH METHOD IS APPLIED TO
THE 1024 NUMERIC STRINGS DATA.

MEAN SQUARE DEVIATION : 107.82

Divisor 255.

```
1 KEYS BUCKET = 3 : +++
2 KEYS BUCKET = 2 : **
3 KEYS BUCKET = 4 : ** **
4 KEYS BUCKET = 2 : **
5 KEYS BUCKET = 0 :
G KEYS BUCKET = 2 : **
7 KEYS BUCKET = 1 : 1
8 KEYS BUCKET = 1 : +
9 KEYS BUCKET = 3 : ***
10 KEYS BUCKET = 2 : **
11 KEYS BUCKET = 3 : ***
12 KEYS BUCKET = O :
13 KEYS BUCKET = 1 : *
14 KEYS BUCKET = 0 :
15 KEYS BUCKET ≈ O :
16 KEYS BUCKET = 0 :
17 KEYS BUCKET = 1 : 4
18 KEYS BUCKET = 1 : *
19 KEYS BUCKET = 1 : *
20 KEYS BUCKET = 0 :
21 KEYS BUCKET = O :
22 KEYS BUCKET = 1 : 1
23 KEYS BUCKET = 1 : *
24 KEYS BUCKET = 1 : '
25 KEYS BUCKET = 0 :
26 KEYS BUCKET = 1 : +
27 KEYS BUCKET = 1 : +
28 KEYS BUCKET = 1 : *
29 KEYS BUCKET = 2 : **
30 KEYS BUCKET = 0 :
31 KEYS BUCKET = 1 : *
32 KEYS BUCKET = 0 :
33 KEYS BUCKET = 3 : +++
34 KEYS BUCKET = 0 :
35 KEYS BUCKET = 1 : +
36 KEYS BUCKET = 2 : **
37 KEYS BUCKET = 2 : **
38 KEYS BUCKET = O :
39 KEYS BUCKET = 0 :
40 KEYS BUCKET = 1 : +
OVER 40 KEYS BUCKET
           = 6 : ** * * *
```

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THE DIGIT ANALYSIS HASH METHOD IS APPLIED TO
THE 1024 NUMERIC STRINGS DATA.
EIGHT DIGITS ARE SELECTED FROM ONE WORD KEY.
MEAN SQUARE DEVIATION :
                         19.74
1 KEYS BUCKET = 1 : *
2 KEYS BUCKET = 0 :
3 KEYS BUCKET = 4 : ****
4 KEYS BUCKET = 7 : ******
5 KEYS BUCKET = 10 : *******
6 KEYS BUCKET = 16 : **********
7 KEYS BUCKET = 21 : **************
8 KEYS BUCKET = 13 : *********
9 KEYS BUCKET = 23 : ***************
10 KEYS BUCKET = 11 : ********
11 KEYS BUCKET = 10 : *******
12 KEYS BUCKET = 7 : ******
13 KEYS BUCKET = 1 : *
14 KEYS BUCKET = 1 : *
15 KEYS BUCKET = 0 :
16 KEYS BUCKET = 3 : ***
17 KEYS BUCKET = 0 :
18 KEYS BUCKET = 0 :
19 KEYS BUCKET = 0 :
20 KEYS BUCKET = 0 :
21 KEYS BUCKET = 0 :
22 KEYS BUCKET = 0 :
23 KEYS BUCKET = 0 :
24 KEYS BUCKET = 0 :
25 KEYS BUCKET = 0 :
26 KEYS BUCKET = 0 :
27 KEYS BUCKET = 0 :
28 KEYS BUCKET = 0 :
29 KEYS BUCKET = 0 :
30 KEYS BUCKET = 0 :
31 KEYS BUCKET = 0 :
32 KEYS BUCKET = 0 :
33 KEYS BUCKET = 0 :
34 KEYS BUCKET = 0 :
35 KEYS BUCKET = 0 :
36 KEYS BUCKET = 0 :
37 KEYS BUCKET = 0 :
38 KEYS BUCKET = 0 :
39 KEYS BUCKET = 0 :
40 KEYS BUCKET = 0 :
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OVER 40 KEYS BUCKET

= 0: