

## Frequency of Digrams (two-character sequences) in File text1-encrypted.txt (1964 alphabetic characters, encrypted by substitution)

Row  $x$ , column  $y$  of the table below gives the relative frequency of the two-character sequence  $xy$  in the file `text1-encrypted.txt`. Specifically, it gives the number of occurrences of  $xy$  per 10,000 characters of text. Characters other than letters have been deleted, and upper and lower case letters have been treated as identical.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
B	0	25	46	5	25	0	5	102	0	10	61	20	15	0	0	5	10	46	15	41	51	97	15	10	0	10
C	0	25	0	5	20	10	0	31	25	56	102	133	10	10	0	5	0	25	36	0	51	66	15	10	5	0
D	0	0	5	0	0	0	10	10	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	5	41	0	25	5	5	61	0	0	10	5	0	0	0	46	5	61	0	0	10	31	0	0	0	5
F	0	10	5	0	0	0	0	46	0	15	5	0	0	0	10	0	15	15	0	5	0	25	0	0	0	0
G	0	0	41	0	0	0	10	250	5	0	15	5	0	0	0	0	5	92	0	0	20	31	0	0	0	5
H	0	148	25	0	46	20	15	41	66	71	163	76	41	15	0	25	5	102	15	0	102	61	138	51	0	20
I	5	5	20	10	0	0	41	31	10	10	0	0	0	0	0	0	5	25	0	0	31	87	0	0	0	0
J	0	5	56	0	5	5	0	87	15	76	5	0	0	0	0	5	20	76	0	41	15	36	31	0	0	5
K	0	10	92	5	15	5	20	51	41	25	36	10	0	0	10	31	20	87	10	20	219	51	15	15	0	15
L	0	5	15	0	10	0	5	66	25	0	46	5	0	5	0	5	5	36	61	20	92	46	107	15	0	10
M	0	0	5	0	0	0	0	66	0	0	0	0	0	0	0	0	0	5	0	0	0	10	0	0	0	0
N	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	5	10	0	0	0	0	0
O	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0
P	0	25	0	0	0	0	15	41	0	31	15	0	0	0	0	0	0	31	0	0	10	31	0	0	0	0
Q	0	36	10	0	0	0	0	15	10	36	82	31	0	0	0	0	0	5	5	0	31	0	0	0	0	0
R	0	133	15	0	51	20	5	5	31	66	87	143	15	0	0	31	10	5	36	10	158	0	20	0	0	5
S	0	25	10	0	0	0	20	51	5	0	5	10	0	0	0	0	5	41	0	5	5	15	5	0	0	0
T	0	0	25	0	5	20	0	25	0	0	41	0	0	0	0	0	0	15	5	5	36	0	0	0	0	0
U	0	31	107	0	20	10	290	153	15	5	71	0	0	0	0	10	20	66	5	10	56	82	5	15	0	41
V	0	66	0	5	82	41	5	10	10	56	36	133	5	0	0	10	71	10	15	5	41	0	15	102	10	15
W	0	10	61	0	10	15	10	36	15	15	20	0	0	0	0	15	46	41	0	10	25	31	20	10	0	5
X	0	51	20	0	0	0	0	20	5	10	5	0	0	0	0	0	10	20	0	0	46	31	10	0	0	0
Y	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Z	0	0	36	0	0	0	20	25	0	0	0	5	0	0	0	0	0	36	0	0	5	10	0	0	0	0

The most common digrams are:

<b>Digram</b>	<b>Frequency (per 10,000 chars)</b>
<b>UG</b>	290
<b>GH</b>	250
<b>KU</b>	219
<b>HK</b>	163
<b>RU</b>	158
<b>UH</b>	153
<b>HB</b>	148
<b>RL</b>	143
<b>HW</b>	138
<b>VL</b>	133
<b>CL</b>	133
<b>RB</b>	133
<b>UC</b>	107
<b>LW</b>	107
<b>HU</b>	102
<b>HR</b>	102
<b>VX</b>	102
<b>BH</b>	102
<b>CK</b>	102
<b>BV</b>	97
<b>LU</b>	92
<b>GR</b>	92
<b>KC</b>	92
<b>IV</b>	87
<b>JH</b>	87
<b>KR</b>	87
<b>RK</b>	87

<b>Digram</b>	<b>Frequency (per 10,000 chars)</b>
<b>QK</b>	82
<b>VE</b>	82
<b>UV</b>	82
<b>JJ</b>	76
<b>HL</b>	76
<b>JR</b>	76
<b>HJ</b>	71
<b>UK</b>	71
<b>VQ</b>	71
<b>VB</b>	66
<b>MH</b>	66
<b>RJ</b>	66
<b>HI</b>	66
<b>UR</b>	66
<b>CV</b>	66
<b>LH</b>	66
<b>LS</b>	61
<b>ER</b>	61
<b>EH</b>	61
<b>HV</b>	61
<b>BK</b>	61
<b>WC</b>	61
<b>JC</b>	56
<b>VJ</b>	56
<b>UU</b>	56
<b>CJ</b>	56