|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 |
| 1 | G | I | B | S | O |
| 2 | N | A | C | D | E |
| 3 | F | H | K | L | M |
| 4 | P | Q | R | T | U |
| 5 | V | W | X | Y | Z |

**PLAYFAIR CIPHER:**

* PLAINTEXT = ENIGMA MACHINE

NEEDS TO BE EVEN LENGTH

1. Same row
   1. Right 1
2. Diff row and column
   1. Swap column, keep row
3. Same column
   1. Down 1
4. Double letter
   1. Add junk letter

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| P | I | A | Z | N |
| B | C | D | E | F |
| G | H | K | L | M |
| O | Q | R | S | T |
| U | V | W | X | Y |

EN IG MA MA CH IN EX

FZ PH KN KN HQ AP LZ

**BIFID CIPHER:**

* PLAINTEXT = ENIGMA MACHINE

ENIGMA MACHINE

221132 3223122

512152 5232215

22113232231225121525232215

22 11 32 32 23 12 25 12 15 25 23 22 15

A G H H C I E I O E C A O

Ciphertext: AGHHCIEIOECAO

**HILL CIPHER:**

#columns = #rows

K =

K-1 = 1/9

PLAINTEXT = HELP

=

K \* M = mod 26 = = HIAT