

**UNIVERSITÀ DEGLI STUDI DI MILANO**  
**POLO DIDATTICO E DI RICERCA DI CREMA**

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*Laurea triennale in Informatica*



Progetto di

**CALCOLO DELLE PROBABILITÀ E**  
**STATISTICA MATEMATICA**

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## Cenni teorici

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Il linguaggio è un aspetto fondamentale e caratterizzante dell'essere umano, dal momento che ne rappresenta il principale mezzo di comunicazione sia nelle sue forme scritte che parlate. Non stupisce dunque l'attenzione che gli viene attribuita nella moderna Teoria dell'Informazione, all'interno della quale si distinguono specifiche aree di ricerca come quella dell'Elaborazione del linguaggio naturale (NLP, *Natural Language Processing*), orientata all'analisi metodica e strutturale del linguaggio stesso. L'attuazione di tali indagini è resa possibile dalla potenza di calcolo offerta dagli elaboratori elettronici, che scompongono il processo di elaborazione in tre fasi distinte (assumiamo di considerare lo studio di un testo scritto):

- *analisi lessicale*, prevede la scomposizione delle espressioni nei vari simboli costitutivi (lettere, cifre, segni di punteggiatura), detti token;
- *analisi sintattica*, verifica la correttezza delle frasi e delle loro strutture;
- *analisi semantica*, assegna un significato all'espressione linguistica.

Lo strumento impiegato per l'analisi lessicale è chiamato *scanner* o *lexer*, un programma (o parte di esso) che scansiona uno stream di caratteri in ingresso e restituisce uno stream di token come uscita. Una volta individuati sarà possibile effettuare su di essi tutti gli studi opportuni, ad esempio calcolarne le occorrenze nel testo in esame. In particolare, si parlerà di *unigrammi* riferendosi ai singoli token, *digrammi* per le coppie, *trigrammi* per le triple (anche se sarebbe più corretto chiamarli *digrammi con offset*). Più in generale con il termine *n-grammi* si indicano le sottosequenze di  $n$  elementi estratti da una sequenza data.

Calcolare le occorrenze di tali  $n$ -grammi, costituisce un primo passo verso l'applicazione di un modello statistico ad un testo attraverso le distribuzioni di probabilità.

## Scopo del progetto

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Scopo del progetto sarà realizzare un analizzatore lessicale che studi le frequenze di occorrenza delle lettere dell'alfabeto di una certa lingua, considerando ogni *unigramma*, *digramma* e *trigramma* di cui è composto.

Il linguaggio di programmazione scelto per la realizzazione dell'analizzatore è C++.

L'ambiente di sviluppo è *Dev-C++* (versione 4.9.9.2) della *Bloodshed Software*.

<http://www.bloodshed.net/dev/>

Il testo analizzato è *Il fu Mattia Pascal* di *Luigi Pirandello*, in lingua italiana.

# Codice

---

```
#include <stdio.h>
#include <stdlib.h>

int main()
{
    //dichiarazione variabili
    int i, j, k;
    char c, d, e;
    //    vettori coi contatori di unigrammi, digrammi e trigrammi
    long gra[27], d_gra[27][27], t_gra[27][27][27];
    FILE *Fp_in;    //conterrà il testo da analizzare
    FILE *Fp_out;  //verrà utilizzato per la scansione del testo

    //apertura file
    Fp_in = fopen("Il fu Mattia Pascal.txt", "r");
    Fp_out = fopen("temp.txt", "w");

    //inizializzazione dei vettori a 0
    for(i=0;i<27;i++) gra[i] = 0;
    for(i=0;i<27;i++)
        for(j=0;j<27;j++) d_gra[i][j] = 0;
    for(i=0;i<27;i++)
        for(j=0;j<27;j++)
            for(k=0;k<27;k++) t_gra[i][j][k] = 0;

    //riempimento vettore gra
    while(fscanf(Fp_in, "%c", &c) == 1)
    {
        switch(c) //per ogni lettera o spazio, incrementa il relativo contatore
        {
            case ' ':; case 10: // il 10 è il codice ASCII per l' "a capo"
                //si riscrive ora il carattere in Fp.out, così da avere tutto
                //su una riga e minuscolo
                fprintf(Fp_out, " ");
                gra[0]++;
                break;
            case 'a':; case 'A':
                fprintf(Fp_out, "a");
                gra[1]++;
                break;
            case 'b':; case 'B':
                fprintf(Fp_out, "b");
                gra[2]++;
                break;
            case 'c':; case 'C':
                fprintf(Fp_out, "c");
                gra[3]++;
                break;
            case 'd':; case 'D':
                fprintf(Fp_out, "d");
                gra[4]++;
                break;
            case 'e':; case 'E':
```

```
fprintf(Fp_out, "e");
gra[5]++;
break;
case 'f':; case 'F':
    fprintf(Fp_out, "f");
    gra[6]++;
    break;
case 'g':; case 'G':
    fprintf(Fp_out, "g");
    gra[7]++;
    break;
case 'h':; case 'H':
    fprintf(Fp_out, "h");
    gra[8]++;
    break;
case 'i':; case 'I':
    fprintf(Fp_out, "i");
    gra[9]++;
    break;
case 'j':; case 'J': //si prende in considerazione l'alfabeto inglese
    fprintf(Fp_out, "j");
    gra[10]++;
    break;
case 'k':; case 'K':
    fprintf(Fp_out, "k");
    gra[11]++;
    break;
case 'l':; case 'L':
    fprintf(Fp_out, "l");
    gra[12]++;
    break;
case 'm':; case 'M':
    fprintf(Fp_out, "m");
    gra[13]++;
    break;
case 'n':; case 'N':
    fprintf(Fp_out, "n");
    gra[14]++;
    break;
case 'o':; case 'O':
    fprintf(Fp_out, "o");
    gra[15]++;
    break;
case 'p':; case 'P':
    fprintf(Fp_out, "p");
    gra[16]++;
    break;
case 'q':; case 'Q':
    fprintf(Fp_out, "q");
    gra[17]++;
    break;
case 'r':; case 'R':
    fprintf(Fp_out, "r");
    gra[18]++;
    break;
case 's':; case 'S':
    fprintf(Fp_out, "s");
    gra[19]++;
```

```

        break;
    case 't':; case 'T':
        fprintf(Fp_out, "t");
        gra[20]++;
        break;
    case 'u':; case 'U':
        fprintf(Fp_out, "u");
        gra[21]++;
        break;
    case 'v':; case 'V':
        fprintf(Fp_out, "v");
        gra[22]++;
        break;
    case 'w':; case 'W':
        fprintf(Fp_out, "w");
        gra[23]++;
        break;
    case 'x':; case 'X':
        fprintf(Fp_out, "x");
        gra[24]++;
        break;
    case 'y':; case 'Y':
        fprintf(Fp_out, "y");
        gra[25]++;
        break;
    case 'z':; case 'Z':
        fprintf(Fp_out, "z");
        gra[26]++;
        break;
} // fine switch
} // fine while

//chiusura dei file aperti
fflush(Fp_in); fclose(Fp_in);
fflush(Fp_out); fclose(Fp_out);

Fp_in = fopen("temp.txt", "r");

i = 0;
//riempimento vettori d_gra e t_gra
while(fscanf(Fp_in, "%c", &c) == 1)
{
    i++;
    //lettura secondo carattere per i digrammi
    fscanf(Fp_in, "%c", &d);
    //si aggiunge una condizione feof per evitare che l'ultimo carattere
    //si confronti con sé stesso
    if(!feof(Fp_in))
    {
        if ((c == ' ') && (d == ' '))
            d_gra[0][0]++;
        else if ((c == ' ') && (d != ' '))
            d_gra[0][d-96]++;
            //viene sottratto 96 perché in ASCII la 'a' minuscola ha codice 97
        else if ((c != ' ') && (d == ' '))
            d_gra[c-96][0]++;
        else
            d_gra[c-96][d-96]++;
    }
}

```

```

}
//lettura terzo carattere per i trigrammi
fscanf(Fp_in, "%c", &e);
if(!feof(Fp_in))
{
    if ((c == ' ') && (d == ' ') && (e == ' '))
        t_gra[0][0][0]++;
    else if ((c == ' ') && (d == ' ') && (e != ' '))
        t_gra[0][0][e-96]++;
    else if ((c == ' ') && (d != ' ') && (e == ' '))
        t_gra[0][d-96][0]++;
    else if ((c == ' ') && (d != ' ') && (e != ' '))
        t_gra[0][d-96][e-96]++;
    else if ((c != ' ') && (d == ' ') && (e == ' '))
        t_gra[c-96][0][0]++;
    else if ((c != ' ') && (d == ' ') && (e != ' '))
        t_gra[c-96][0][e-96]++;
    else if ((c != ' ') && (d != ' ') && (e == ' '))
        t_gra[c-96][d-96][0]++;
    else if ((c != ' ') && (d != ' ') && (e != ' '))
        t_gra[c-96][d-96][e-96]++;
}

fseek(Fp_in, i, 0); //porta il cursore nella posizione successiva a 'c'
} //chiude il while

fflush(Fp_in);    fclose(Fp_in);

//creazione di un file .csv su cui scrivere le tabelle dei risultati
Fp_out = fopen("risultati.csv", "w");

//risultati vettore gra
// scrittura intestazione
fprintf(Fp_out, ";");
for (i=0; i<27; i++)
    if (i == 0)
        fprintf(Fp_out, "_;");
    else
        fprintf(Fp_out, "%c;", i+96);
fprintf(Fp_out, "\n");
// scrittura valori del vettore
fprintf(Fp_out, ";");
for (i=0; i<27; i++)
    fprintf(Fp_out, "%d;", gra[i]);
fprintf(Fp_out, "\n\n");

//risultati vettore d_gra
// scrittura intestazioni delle colonne
fprintf(Fp_out, ";");
for (i=0; i<27; i++)
    if (i == 0)
        fprintf(Fp_out, "_;");
    else
        fprintf(Fp_out, "%c;", i+96);
fprintf(Fp_out, "\n");
// scrittura valori del vettore
for (i=0; i<27; i++)
{

```



```

    if (i == 0) //riserva la prima colonna per le intestazioni delle righe
        fprintf(Fp_out, "_;");
    else
        fprintf(Fp_out, "%c;", i+96);

    for (j=0; j<27; j++)
        fprintf(Fp_out, "%d;", d_gra[i][j]);

    fprintf(Fp_out, "\n");
}
fprintf(Fp_out, "\n\n");

//risultati vettore t_gra
// scrittura intestazioni delle colonne
fprintf(Fp_out, ";");
for (i=0; i<27; i++)
    if (i==0)
        fprintf(Fp_out, "_;");
    else
        fprintf(Fp_out, "%c;", i+96);
fprintf(Fp_out, "\n");
// scrittura valori del vettore
for (i=0; i<27; i++)
{
    for (j=0; j<27; j++)
    {
        if ((i == 0) && (j == 0)) //prima colonna per le intestazioni
            fprintf(Fp_out, "_,_;");
        else if ((i == 0) && (j != 0))
            fprintf(Fp_out, "_,%c;", j+96);
        else if ((i != 0) && (j == 0))
            fprintf(Fp_out, "%c,_;", i+96);
        else if ((i != 0) && (j != 0))
            fprintf(Fp_out, "%c,%c;", i+96, j+96);

        for (k=0; k<27; k++)
            fprintf(Fp_out, "%d;", t_gra[i][j][k]);

        fprintf(Fp_out, "\n");
    }
}

fflush(Fp_out);
fclose(Fp_out);
return 0;
}

```

## Nota sul codice

---

Il programma prende in considerazione solo lettere non accentate e spazi. Cifre, caratteri accentati e segni di punteggiatura sono volutamente ignorati non essendo oggetto di studio in questo progetto.

# Occorrenze

---

## Unigrammi

| _     | a     | b    | c     | d     | e     | f    | g    | h    | i     | j   |
|-------|-------|------|-------|-------|-------|------|------|------|-------|-----|
| 76063 | 41155 | 3707 | 16032 | 11758 | 39907 | 3847 | 5974 | 4370 | 35355 | 203 |

| k | l     | m     | n     | o     | p     | q    | r     | s     | t     | u     |
|---|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| 7 | 19881 | 11811 | 24507 | 34469 | 10785 | 2248 | 22933 | 18958 | 20192 | 10636 |

| v    | w | x  | y | z    |
|------|---|----|---|------|
| 8514 | 3 | 53 | 2 | 2373 |

**Digrammi - 1/3**

|   | _     | a    | b    | c    | d    | e    | f    | g    | h    | i    |
|---|-------|------|------|------|------|------|------|------|------|------|
| _ | 2493  | 6412 | 1307 | 7634 | 6795 | 3798 | 2549 | 1717 | 258  | 3973 |
| a | 16658 | 0    | 331  | 1038 | 826  | 54   | 234  | 723  | 82   | 704  |
| b | 6     | 555  | 605  | 0    | 0    | 910  | 0    | 0    | 0    | 812  |
| c | 101   | 2102 | 0    | 1464 | 0    | 1361 | 0    | 0    | 3787 | 1836 |
| d | 215   | 1976 | 1    | 0    | 94   | 2615 | 0    | 0    | 0    | 3719 |
| e | 16249 | 189  | 398  | 747  | 781  | 8    | 43   | 882  | 44   | 863  |
| f | 17    | 974  | 0    | 1    | 0    | 385  | 378  | 0    | 0    | 790  |
| g | 12    | 356  | 0    | 0    | 0    | 442  | 0    | 420  | 72   | 1241 |
| h | 475   | 187  | 0    | 0    | 0    | 2585 | 0    | 0    | 0    | 994  |
| i | 12550 | 3139 | 310  | 1217 | 585  | 1214 | 146  | 843  | 3    | 101  |
| j | 4     | 47   | 0    | 0    | 0    | 17   | 0    | 0    | 0    | 0    |
| k | 1     | 2    | 0    | 0    | 0    | 3    | 0    | 0    | 0    | 0    |
| l | 3021  | 4438 | 34   | 235  | 105  | 2816 | 4    | 28   | 37   | 2667 |
| m | 92    | 2897 | 251  | 0    | 0    | 2903 | 0    | 1    | 13   | 3009 |
| n | 4405  | 2417 | 6    | 883  | 1675 | 2502 | 164  | 362  | 3    | 1301 |
| o | 15776 | 6    | 96   | 730  | 283  | 10   | 177  | 639  | 56   | 417  |
| p | 9     | 1643 | 0    | 0    | 0    | 2820 | 3    | 0    | 4    | 1574 |
| q | 2     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| r | 2365  | 4145 | 111  | 449  | 451  | 4796 | 15   | 178  | 1    | 3578 |
| s | 635   | 1754 | 59   | 1497 | 16   | 3045 | 97   | 73   | 0    | 2959 |
| t | 452   | 3594 | 0    | 1    | 0    | 3351 | 0    | 0    | 7    | 2154 |
| u | 388   | 1228 | 198  | 136  | 147  | 1635 | 37   | 108  | 3    | 561  |
| v | 38    | 2408 | 0    | 0    | 0    | 2558 | 0    | 0    | 0    | 1159 |
| w | 1     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| x | 42    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 6    |
| y | 1     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| z | 55    | 686  | 0    | 0    | 0    | 79   | 0    | 0    | 0    | 937  |

**Digrammi - 2/3**

|          | <b>j</b> | <b>k</b> | <b>l</b> | <b>m</b> | <b>n</b> | <b>o</b> | <b>p</b> | <b>q</b> | <b>r</b> | <b>s</b> |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>_</b> | 10       | 2        | 4709     | 5551     | 3412     | 1047     | 6596     | 1972     | 1881     | 7383     |
| <b>a</b> | 96       | 0        | 3187     | 1257     | 4434     | 20       | 958      | 9        | 3651     | 1443     |
| <b>b</b> | 0        | 0        | 76       | 0        | 0        | 172      | 0        | 0        | 375      | 4        |
| <b>c</b> | 0        | 0        | 96       | 1        | 0        | 4335     | 2        | 45       | 348      | 1        |
| <b>d</b> | 0        | 0        | 3        | 0        | 2        | 2065     | 1        | 0        | 432      | 0        |
| <b>e</b> | 0        | 0        | 2840     | 510      | 4062     | 21       | 157      | 24       | 6235     | 2751     |
| <b>f</b> | 0        | 0        | 44       | 0        | 0        | 707      | 0        | 0        | 293      | 0        |
| <b>g</b> | 0        | 0        | 1290     | 0        | 955      | 334      | 0        | 0        | 413      | 0        |
| <b>h</b> | 0        | 0        | 0        | 0        | 0        | 127      | 0        | 0        | 1        | 0        |
| <b>i</b> | 0        | 3        | 1841     | 1313     | 3609     | 3136     | 209      | 5        | 838      | 1500     |
| <b>j</b> | 0        | 0        | 0        | 0        | 0        | 114      | 0        | 0        | 0        | 0        |
| <b>k</b> | 0        | 0        | 0        | 1        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>l</b> | 0        | 0        | 2893     | 224      | 0        | 1621     | 66       | 3        | 0        | 54       |
| <b>m</b> | 0        | 0        | 1        | 305      | 0        | 1521     | 694      | 0        | 0        | 2        |
| <b>n</b> | 0        | 0        | 0        | 1        | 548      | 4802     | 0        | 170      | 0        | 586      |
| <b>o</b> | 55       | 1        | 2053     | 1750     | 4584     | 13       | 504      | 7        | 3444     | 2014     |
| <b>p</b> | 0        | 0        | 65       | 0        | 0        | 2194     | 569      | 0        | 1455     | 6        |
| <b>q</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>r</b> | 0        | 1        | 434      | 653      | 494      | 2515     | 66       | 3        | 517      | 628      |
| <b>s</b> | 0        | 0        | 3        | 64       | 4        | 1984     | 833      | 10       | 1        | 2180     |
| <b>t</b> | 0        | 0        | 1        | 0        | 2        | 5063     | 0        | 0        | 2029     | 3        |
| <b>u</b> | 42       | 0        | 342      | 181      | 2400     | 777      | 129      | 0        | 735      | 402      |
| <b>v</b> | 0        | 0        | 0        | 0        | 1        | 1696     | 0        | 0        | 285      | 1        |
| <b>w</b> | 0        | 0        | 0        | 0        | 0        | 1        | 0        | 0        | 0        | 0        |
| <b>x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y</b> | 0        | 0        | 0        | 0        | 0        | 1        | 0        | 0        | 0        | 0        |
| <b>z</b> | 0        | 0        | 3        | 0        | 0        | 203      | 0        | 0        | 0        | 0        |

**Digrammi - 3/3**

|          | <b>t</b> | <b>u</b> | <b>v</b> | <b>w</b> | <b>x</b> | <b>y</b> | <b>z</b> |
|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>_</b> | 2312     | 1765     | 2389     | 1        | 12       | 1        | 84       |
| <b>a</b> | 2637     | 107      | 2238     | 0        | 36       | 1        | 431      |
| <b>b</b> | 0        | 192      | 0        | 0        | 0        | 0        | 0        |
| <b>c</b> | 2        | 551      | 0        | 0        | 0        | 0        | 0        |
| <b>d</b> | 0        | 633      | 2        | 0        | 0        | 0        | 0        |
| <b>e</b> | 1196     | 9        | 1627     | 2        | 0        | 0        | 268      |
| <b>f</b> | 0        | 258      | 0        | 0        | 0        | 0        | 0        |
| <b>g</b> | 1        | 438      | 0        | 0        | 0        | 0        | 0        |
| <b>h</b> | 1        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>i</b> | 1557     | 372      | 648      | 0        | 2        | 0        | 214      |
| <b>j</b> | 0        | 21       | 0        | 0        | 0        | 0        | 0        |
| <b>k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>l</b> | 851      | 641      | 57       | 0        | 0        | 0        | 86       |
| <b>m</b> | 2        | 120      | 0        | 0        | 0        | 0        | 0        |
| <b>n</b> | 3397     | 398      | 177      | 0        | 0        | 0        | 710      |
| <b>o</b> | 814      | 34       | 956      | 0        | 0        | 0        | 50       |
| <b>p</b> | 2        | 440      | 1        | 0        | 0        | 0        | 0        |
| <b>q</b> | 0        | 2246     | 0        | 0        | 0        | 0        | 0        |
| <b>r</b> | 1060     | 202      | 181      | 0        | 0        | 0        | 90       |
| <b>s</b> | 2660     | 1053     | 31       | 0        | 0        | 0        | 0        |
| <b>t</b> | 2558     | 968      | 0        | 0        | 0        | 0        | 9        |
| <b>u</b> | 1141     | 0        | 11       | 0        | 2        | 0        | 33       |
| <b>v</b> | 0        | 176      | 192      | 0        | 0        | 0        | 0        |
| <b>w</b> | 1        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x</b> | 0        | 0        | 4        | 0        | 1        | 0        | 0        |
| <b>y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>z</b> | 0        | 12       | 0        | 0        | 0        | 0        | 398      |

**Trigrammi - 1/81**

|     | _    | a    | b   | c   | d   | e    | f   | g   | h    | i    |
|-----|------|------|-----|-----|-----|------|-----|-----|------|------|
| _ _ | 62   | 160  | 43  | 192 | 167 | 248  | 70  | 88  | 13   | 118  |
| _ a | 1482 | 0    | 110 | 235 | 380 | 0    | 100 | 68  | 72   | 31   |
| _ b | 3    | 306  | 0   | 0   | 0   | 403  | 0   | 0   | 0    | 222  |
| _ c | 52   | 1063 | 0   | 0   | 0   | 361  | 0   | 0   | 2306 | 388  |
| _ d | 15   | 1129 | 0   | 0   | 0   | 1425 | 0   | 0   | 0    | 2878 |
| _ e | 2230 | 0    | 57  | 146 | 56  | 0    | 9   | 102 | 44   | 0    |
| _ f | 0    | 800  | 0   | 0   | 0   | 210  | 0   | 0   | 0    | 530  |
| _ g | 0    | 51   | 0   | 0   | 0   | 119  | 0   | 0   | 3    | 590  |
| _ h | 0    | 157  | 0   | 0   | 0   | 6    | 0   | 0   | 0    | 0    |
| _ i | 239  | 6    | 0   | 1   | 17  | 1    | 0   | 16  | 2    | 4    |
| _ j | 0    | 0    | 0   | 0   | 0   | 10   | 0   | 0   | 0    | 0    |
| _ k | 0    | 1    | 0   | 0   | 0   | 0    | 0   | 0   | 0    | 0    |
| _ l | 280  | 1999 | 0   | 0   | 0   | 1156 | 0   | 0   | 31   | 334  |
| _ m | 7    | 1823 | 1   | 0   | 0   | 1061 | 0   | 0   | 12   | 1949 |
| _ n | 106  | 188  | 0   | 0   | 0   | 876  | 0   | 0   | 2    | 88   |
| _ o | 173  | 0    | 21  | 177 | 11  | 0    | 13  | 85  | 56   | 0    |
| _ p | 0    | 1190 | 0   | 0   | 0   | 1968 | 3   | 0   | 0    | 877  |
| _ q | 0    | 0    | 0   | 0   | 0   | 0    | 0   | 0   | 0    | 0    |
| _ r | 0    | 241  | 0   | 0   | 0   | 321  | 0   | 0   | 0    | 1061 |
| _ s | 215  | 668  | 56  | 595 | 14  | 1447 | 78  | 52  | 0    | 1153 |
| _ t | 1    | 409  | 0   | 0   | 0   | 436  | 0   | 0   | 4    | 143  |
| _ u | 0    | 0    | 10  | 21  | 7   | 0    | 9   | 4   | 2    | 0    |
| _ v | 1    | 173  | 0   | 0   | 0   | 827  | 0   | 0   | 0    | 747  |
| _ w | 0    | 0    | 0   | 0   | 0   | 0    | 0   | 0   | 0    | 0    |
| _ x | 1    | 0    | 0   | 0   | 0   | 0    | 0   | 0   | 0    | 6    |
| _ y | 0    | 0    | 0   | 0   | 0   | 0    | 0   | 0   | 0    | 0    |
| _ z | 0    | 10   | 0   | 0   | 0   | 7    | 0   | 0   | 0    | 56   |

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|    | j  | k | l    | m   | n    | o    | p   | q  | r   | s   |
|----|----|---|------|-----|------|------|-----|----|-----|-----|
| _  | 2  | 1 | 125  | 301 | 142  | 48   | 166 | 33 | 75  | 222 |
| _a | 16 | 0 | 1275 | 158 | 843  | 0    | 224 | 7  | 145 | 145 |
| _b | 0  | 0 | 0    | 0   | 0    | 74   | 0   | 0  | 140 | 1   |
| _c | 0  | 0 | 13   | 1   | 0    | 2955 | 1   | 0  | 223 | 1   |
| _d | 0  | 0 | 3    | 0   | 2    | 875  | 1   | 0  | 4   | 0   |
| _e | 0  | 0 | 122  | 9   | 70   | 0    | 27  | 5  | 486 | 402 |
| _f | 0  | 0 | 8    | 0   | 0    | 560  | 0   | 0  | 215 | 0   |
| _g | 0  | 0 | 390  | 0   | 0    | 89   | 0   | 0  | 250 | 0   |
| _h | 0  | 0 | 0    | 0   | 0    | 95   | 0   | 0  | 0   | 0   |
| _i | 0  | 0 | 1203 | 212 | 1671 | 509  | 3   | 0  | 27  | 50  |
| _j | 0  | 0 | 0    | 0   | 0    | 0    | 0   | 0  | 0   | 0   |
| _k | 0  | 0 | 0    | 1   | 0    | 0    | 0   | 0  | 0   | 0   |
| _l | 0  | 0 | 2    | 0   | 0    | 534  | 0   | 0  | 0   | 0   |
| _m | 0  | 0 | 0    | 1   | 0    | 630  | 0   | 0  | 0   | 1   |
| _n | 0  | 0 | 0    | 0   | 0    | 1967 | 0   | 0  | 0   | 0   |
| _o | 0  | 0 | 49   | 21  | 28   | 0    | 30  | 0  | 299 | 55  |
| _p | 0  | 0 | 16   | 0   | 0    | 1327 | 0   | 0  | 899 | 1   |
| _q | 0  | 0 | 0    | 0   | 0    | 0    | 0   | 0  | 0   | 0   |
| _r | 0  | 0 | 0    | 0   | 0    | 216  | 0   | 0  | 0   | 0   |
| _s | 0  | 0 | 1    | 50  | 3    | 875  | 418 | 9  | 1   | 0   |
| _t | 0  | 0 | 0    | 0   | 1    | 189  | 0   | 0  | 583 | 0   |
| _u | 0  | 0 | 16   | 26  | 1579 | 52   | 0   | 0  | 7   | 32  |
| _v | 0  | 0 | 0    | 0   | 1    | 569  | 0   | 0  | 0   | 1   |
| _w | 0  | 0 | 0    | 0   | 0    | 1    | 0   | 0  | 0   | 0   |
| _x | 0  | 0 | 0    | 0   | 0    | 0    | 0   | 0  | 0   | 0   |
| _y | 0  | 0 | 0    | 0   | 0    | 1    | 0   | 0  | 0   | 0   |
| _z | 0  | 0 | 0    | 0   | 0    | 10   | 0   | 0  | 0   | 0   |

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|    | t   | u    | v    | w | x | y | z  |
|----|-----|------|------|---|---|---|----|
| _  | 50  | 44   | 110  | 0 | 9 | 0 | 4  |
| _a | 97  | 12   | 1001 | 0 | 0 | 0 | 11 |
| _b | 0   | 158  | 0    | 0 | 0 | 0 | 0  |
| _c | 1   | 269  | 0    | 0 | 0 | 0 | 0  |
| _d | 0   | 461  | 2    | 0 | 0 | 0 | 0  |
| _e | 11  | 0    | 22   | 0 | 0 | 0 | 0  |
| _f | 0   | 226  | 0    | 0 | 0 | 0 | 0  |
| _g | 0   | 225  | 0    | 0 | 0 | 0 | 0  |
| _h | 0   | 0    | 0    | 0 | 0 | 0 | 0  |
| _i | 8   | 0    | 3    | 0 | 1 | 0 | 0  |
| _j | 0   | 0    | 0    | 0 | 0 | 0 | 0  |
| _k | 0   | 0    | 0    | 0 | 0 | 0 | 0  |
| _l | 0   | 372  | 1    | 0 | 0 | 0 | 0  |
| _m | 2   | 64   | 0    | 0 | 0 | 0 | 0  |
| _n | 3   | 182  | 0    | 0 | 0 | 0 | 0  |
| _o | 21  | 0    | 8    | 0 | 0 | 0 | 0  |
| _p | 0   | 314  | 1    | 0 | 0 | 0 | 0  |
| _q | 0   | 1972 | 0    | 0 | 0 | 0 | 0  |
| _r | 0   | 42   | 0    | 0 | 0 | 0 | 0  |
| _s | 815 | 903  | 30   | 0 | 0 | 0 | 0  |
| _t | 0   | 546  | 0    | 0 | 0 | 0 | 0  |
| _u | 0   | 0    | 0    | 0 | 0 | 0 | 0  |
| _v | 0   | 70   | 0    | 0 | 0 | 0 | 0  |
| _w | 0   | 0    | 0    | 0 | 0 | 0 | 0  |
| _x | 0   | 0    | 4    | 0 | 1 | 0 | 0  |
| _y | 0   | 0    | 0    | 0 | 0 | 0 | 0  |
| _z | 0   | 1    | 0    | 0 | 0 | 0 | 0  |



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|            | _   | a    | b   | c    | d    | e    | f   | g   | h  | i   |
|------------|-----|------|-----|------|------|------|-----|-----|----|-----|
| <b>a,_</b> | 474 | 1051 | 329 | 1797 | 1501 | 841  | 620 | 357 | 22 | 710 |
| <b>a,a</b> | 0   | 0    | 0   | 0    | 0    | 0    | 0   | 0   | 0  | 0   |
| <b>a,b</b> | 0   | 14   | 154 | 0    | 0    | 3    | 0   | 0   | 0  | 136 |
| <b>a,c</b> | 9   | 10   | 0   | 615  | 0    | 193  | 0   | 0   | 6  | 97  |
| <b>a,d</b> | 73  | 95   | 1   | 0    | 69   | 79   | 0   | 0   | 0  | 63  |
| <b>a,e</b> | 3   | 0    | 0   | 0    | 0    | 0    | 0   | 0   | 0  | 0   |
| <b>a,f</b> | 0   | 5    | 0   | 0    | 0    | 5    | 203 | 0   | 0  | 11  |
| <b>a,g</b> | 0   | 58   | 0   | 0    | 0    | 11   | 0   | 153 | 7  | 179 |
| <b>a,h</b> | 77  | 0    | 0   | 0    | 0    | 0    | 0   | 0   | 0  | 5   |
| <b>a,i</b> | 691 | 0    | 0   | 0    | 3    | 0    | 0   | 0   | 0  | 0   |
| <b>a,j</b> | 3   | 19   | 0   | 0    | 0    | 3    | 0   | 0   | 0  | 0   |
| <b>a,k</b> | 0   | 0    | 0   | 0    | 0    | 0    | 0   | 0   | 0  | 0   |
| <b>a,l</b> | 465 | 100  | 34  | 223  | 37   | 456  | 3   | 1   | 0  | 180 |
| <b>a,m</b> | 45  | 122  | 87  | 0    | 0    | 434  | 0   | 0   | 0  | 90  |
| <b>a,n</b> | 131 | 263  | 0   | 607  | 733  | 105  | 5   | 122 | 0  | 262 |
| <b>a,o</b> | 0   | 0    | 0   | 0    | 0    | 0    | 0   | 0   | 0  | 0   |
| <b>a,p</b> | 4   | 21   | 0   | 0    | 0    | 176  | 0   | 0   | 0  | 179 |
| <b>a,q</b> | 0   | 0    | 0   | 0    | 0    | 0    | 0   | 0   | 0  | 0   |
| <b>a,r</b> | 355 | 119  | 48  | 86   | 226  | 1029 | 1   | 68  | 0  | 357 |
| <b>a,s</b> | 3   | 181  | 0   | 288  | 0    | 34   | 6   | 0   | 0  | 182 |
| <b>a,t</b> | 0   | 358  | 0   | 0    | 0    | 195  | 0   | 0   | 0  | 205 |
| <b>a,u</b> | 0   | 0    | 0   | 1    | 5    | 0    | 1   | 0   | 0  | 0   |
| <b>a,v</b> | 1   | 670  | 0   | 0    | 0    | 753  | 0   | 0   | 0  | 66  |
| <b>a,w</b> | 0   | 0    | 0   | 0    | 0    | 0    | 0   | 0   | 0  | 0   |
| <b>a,x</b> | 36  | 0    | 0   | 0    | 0    | 0    | 0   | 0   | 0  | 0   |
| <b>a,y</b> | 1   | 0    | 0   | 0    | 0    | 0    | 0   | 0   | 0  | 0   |
| <b>a,z</b> | 0   | 1    | 0   | 0    | 0    | 0    | 0   | 0   | 0  | 324 |

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|     | j | k | l   | m    | n   | o    | p    | q   | r   | s    |
|-----|---|---|-----|------|-----|------|------|-----|-----|------|
| a,_ | 3 | 0 | 894 | 1480 | 743 | 196  | 1508 | 394 | 448 | 1708 |
| a,a | 0 | 0 | 0   | 0    | 0   | 0    | 0    | 0   | 0   | 0    |
| a,b | 0 | 0 | 1   | 0    | 0   | 10   | 0    | 0   | 8   | 3    |
| a,c | 0 | 0 | 0   | 0    | 0   | 35   | 0    | 45  | 20  | 0    |
| a,d | 0 | 0 | 0   | 0    | 0   | 29   | 0    | 0   | 392 | 0    |
| a,e | 0 | 0 | 2   | 0    | 1   | 0    | 0    | 0   | 0   | 39   |
| a,f | 0 | 0 | 0   | 0    | 0   | 10   | 0    | 0   | 0   | 0    |
| a,g | 0 | 0 | 67  | 0    | 185 | 22   | 0    | 0   | 27  | 0    |
| a,h | 0 | 0 | 0   | 0    | 0   | 0    | 0    | 0   | 0   | 0    |
| a,i | 0 | 0 | 0   | 0    | 0   | 1    | 0    | 0   | 4   | 0    |
| a,j | 0 | 0 | 0   | 0    | 0   | 50   | 0    | 0   | 0   | 0    |
| a,k | 0 | 0 | 0   | 0    | 0   | 0    | 0    | 0   | 0   | 0    |
| a,l | 0 | 0 | 935 | 125  | 0   | 54   | 14   | 3   | 0   | 12   |
| a,m | 0 | 0 | 1   | 131  | 0   | 267  | 80   | 0   | 0   | 0    |
| a,n | 0 | 0 | 0   | 0    | 270 | 759  | 0    | 17  | 0   | 85   |
| a,o | 0 | 0 | 11  | 0    | 0   | 0    | 0    | 0   | 8   | 1    |
| a,p | 0 | 0 | 0   | 0    | 0   | 178  | 332  | 0   | 51  | 0    |
| a,q | 0 | 0 | 0   | 0    | 0   | 0    | 0    | 0   | 0   | 0    |
| a,r | 0 | 0 | 298 | 283  | 30  | 170  | 7    | 0   | 153 | 186  |
| a,s | 0 | 0 | 0   | 9    | 1   | 71   | 79   | 1   | 0   | 392  |
| a,t | 0 | 0 | 0   | 0    | 0   | 1003 | 0    | 0   | 38  | 0    |
| a,u | 0 | 0 | 16  | 7    | 0   | 0    | 0    | 0   | 41  | 23   |
| a,v | 0 | 0 | 0   | 0    | 0   | 309  | 0    | 0   | 261 | 0    |
| a,w | 0 | 0 | 0   | 0    | 0   | 0    | 0    | 0   | 0   | 0    |
| a,x | 0 | 0 | 0   | 0    | 0   | 0    | 0    | 0   | 0   | 0    |
| a,y | 0 | 0 | 0   | 0    | 0   | 0    | 0    | 0   | 0   | 0    |
| a,z | 0 | 0 | 0   | 0    | 0   | 0    | 0    | 0   | 0   | 0    |

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|            | <b>t</b> | <b>u</b> | <b>v</b> | <b>w</b> | <b>x</b> | <b>y</b> | <b>z</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|
| <b>a,_</b> | 463      | 398      | 696      | 1        | 0        | 0        | 24       |
| <b>a,a</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>a,b</b> | 0        | 2        | 0        | 0        | 0        | 0        | 0        |
| <b>a,c</b> | 0        | 8        | 0        | 0        | 0        | 0        | 0        |
| <b>a,d</b> | 0        | 25       | 0        | 0        | 0        | 0        | 0        |
| <b>a,e</b> | 2        | 0        | 7        | 0        | 0        | 0        | 0        |
| <b>a,f</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>a,g</b> | 0        | 14       | 0        | 0        | 0        | 0        | 0        |
| <b>a,h</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>a,i</b> | 3        | 1        | 0        | 0        | 0        | 0        | 1        |
| <b>a,j</b> | 0        | 21       | 0        | 0        | 0        | 0        | 0        |
| <b>a,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>a,l</b> | 408      | 29       | 25       | 0        | 0        | 0        | 83       |
| <b>a,m</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>a,n</b> | 870      | 9        | 0        | 0        | 0        | 0        | 196      |
| <b>a,o</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>a,p</b> | 0        | 17       | 0        | 0        | 0        | 0        | 0        |
| <b>a,q</b> | 0        | 9        | 0        | 0        | 0        | 0        | 0        |
| <b>a,r</b> | 191      | 1        | 39       | 0        | 0        | 0        | 4        |
| <b>a,s</b> | 196      | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>a,t</b> | 758      | 80       | 0        | 0        | 0        | 0        | 0        |
| <b>a,u</b> | 11       | 0        | 0        | 0        | 1        | 0        | 1        |
| <b>a,v</b> | 0        | 46       | 132      | 0        | 0        | 0        | 0        |
| <b>a,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>a,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>a,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>a,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 106      |

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|            | _   | a   | b  | c  | d  | e   | f  | g  | h | i   |
|------------|-----|-----|----|----|----|-----|----|----|---|-----|
| <b>b,_</b> | 0   | 0   | 0  | 2  | 0  | 1   | 0  | 0  | 1 | 0   |
| <b>b,a</b> | 40  | 0   | 21 | 49 | 23 | 0   | 13 | 20 | 1 | 4   |
| <b>b,b</b> | 0   | 42  | 0  | 0  | 0  | 317 | 0  | 0  | 0 | 147 |
| <b>b,c</b> | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>b,d</b> | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>b,e</b> | 247 | 13  | 0  | 18 | 7  | 0   | 2  | 1  | 0 | 6   |
| <b>b,f</b> | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>b,g</b> | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>b,h</b> | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>b,i</b> | 29  | 104 | 43 | 10 | 6  | 16  | 0  | 26 | 0 | 1   |
| <b>b,j</b> | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>b,k</b> | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>b,l</b> | 0   | 0   | 0  | 0  | 0  | 4   | 0  | 0  | 0 | 71  |
| <b>b,m</b> | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>b,n</b> | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>b,o</b> | 47  | 0   | 0  | 42 | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>b,p</b> | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>b,q</b> | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>b,r</b> | 5   | 185 | 0  | 0  | 0  | 48  | 0  | 0  | 0 | 65  |
| <b>b,s</b> | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0 | 3   |
| <b>b,t</b> | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>b,u</b> | 0   | 0   | 0  | 5  | 0  | 2   | 15 | 8  | 0 | 4   |
| <b>b,v</b> | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>b,w</b> | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>b,x</b> | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>b,y</b> | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>b,z</b> | 0   | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0 | 0   |

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|            | <b>j</b> | <b>k</b> | <b>l</b> | <b>m</b> | <b>n</b> | <b>o</b> | <b>p</b> | <b>q</b> | <b>r</b> | <b>s</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>b,_</b> | 0        | 0        | 1        | 0        | 1        | 0        | 0        | 0        | 0        | 0        |
| <b>b,a</b> | 7        | 0        | 60       | 23       | 34       | 0        | 0        | 0        | 65       | 96       |
| <b>b,b</b> | 0        | 0        | 28       | 0        | 0        | 31       | 0        | 0        | 38       | 0        |
| <b>b,c</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,d</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,e</b> | 0        | 0        | 105      | 0        | 221      | 1        | 0        | 0        | 231      | 24       |
| <b>b,f</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,g</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,h</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,i</b> | 0        | 0        | 202      | 7        | 30       | 56       | 1        | 0        | 15       | 100      |
| <b>b,j</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,l</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,m</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,n</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,o</b> | 0        | 0        | 15       | 0        | 30       | 0        | 0        | 0        | 15       | 3        |
| <b>b,p</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,q</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,r</b> | 0        | 0        | 0        | 0        | 0        | 37       | 0        | 0        | 0        | 2        |
| <b>b,s</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,t</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,u</b> | 42       | 0        | 2        | 0        | 0        | 51       | 0        | 0        | 7        | 18       |
| <b>b,v</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |

**Trigrammi – 9/81**

|            | <b>t</b> | <b>u</b> | <b>v</b> | <b>w</b> | <b>x</b> | <b>y</b> | <b>z</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|
| <b>b,_</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,a</b> | 81       | 11       | 7        | 0        | 0        | 0        | 0        |
| <b>b,b</b> | 0        | 2        | 0        | 0        | 0        | 0        | 0        |
| <b>b,c</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,d</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,e</b> | 21       | 0        | 13       | 0        | 0        | 0        | 0        |
| <b>b,f</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,g</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,h</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,i</b> | 161      | 0        | 1        | 0        | 0        | 0        | 4        |
| <b>b,j</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,l</b> | 0        | 1        | 0        | 0        | 0        | 0        | 0        |
| <b>b,m</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,n</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,o</b> | 13       | 5        | 0        | 0        | 0        | 0        | 2        |
| <b>b,p</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,q</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,r</b> | 0        | 33       | 0        | 0        | 0        | 0        | 0        |
| <b>b,s</b> | 0        | 1        | 0        | 0        | 0        | 0        | 0        |
| <b>b,t</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,u</b> | 37       | 0        | 0        | 0        | 0        | 0        | 1        |
| <b>b,v</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>b,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |

**Trigrammi – 10/81**

|            | _   | a   | b | c  | d  | e    | f  | g  | h   | i   |
|------------|-----|-----|---|----|----|------|----|----|-----|-----|
| <b>c,_</b> | 7   | 7   | 0 | 3  | 19 | 11   | 1  | 0  | 0   | 6   |
| <b>c,a</b> | 333 | 0   | 7 | 37 | 72 | 0    | 19 | 38 | 0   | 22  |
| <b>c,b</b> | 0   | 0   | 0 | 0  | 0  | 0    | 0  | 0  | 0   | 0   |
| <b>c,c</b> | 19  | 187 | 0 | 0  | 0  | 93   | 0  | 0  | 429 | 360 |
| <b>c,d</b> | 0   | 0   | 0 | 0  | 0  | 0    | 0  | 0  | 0   | 0   |
| <b>c,e</b> | 350 | 1   | 0 | 2  | 26 | 0    | 0  | 4  | 0   | 0   |
| <b>c,f</b> | 0   | 0   | 0 | 0  | 0  | 0    | 0  | 0  | 0   | 0   |
| <b>c,g</b> | 0   | 0   | 0 | 0  | 0  | 0    | 0  | 0  | 0   | 0   |
| <b>c,h</b> | 293 | 1   | 0 | 0  | 0  | 2548 | 0  | 0  | 0   | 942 |
| <b>c,i</b> | 464 | 436 | 6 | 14 | 44 | 83   | 2  | 10 | 0   | 7   |
| <b>c,j</b> | 0   | 0   | 0 | 0  | 0  | 0    | 0  | 0  | 0   | 0   |
| <b>c,k</b> | 0   | 0   | 0 | 0  | 0  | 0    | 0  | 0  | 0   | 0   |
| <b>c,l</b> | 0   | 65  | 0 | 0  | 0  | 8    | 0  | 0  | 0   | 4   |
| <b>c,m</b> | 0   | 0   | 0 | 0  | 0  | 0    | 0  | 0  | 0   | 0   |
| <b>c,n</b> | 0   | 0   | 0 | 0  | 0  | 0    | 0  | 0  | 0   | 0   |
| <b>c,o</b> | 469 | 1   | 1 | 3  | 24 | 0    | 0  | 43 | 0   | 22  |
| <b>c,p</b> | 0   | 0   | 0 | 0  | 0  | 0    | 0  | 0  | 0   | 2   |
| <b>c,q</b> | 0   | 0   | 0 | 0  | 0  | 0    | 0  | 0  | 0   | 0   |
| <b>c,r</b> | 0   | 8   | 0 | 0  | 0  | 179  | 0  | 0  | 0   | 85  |
| <b>c,s</b> | 0   | 0   | 0 | 0  | 0  | 0    | 0  | 0  | 0   | 0   |
| <b>c,t</b> | 0   | 0   | 0 | 0  | 0  | 0    | 0  | 0  | 0   | 0   |
| <b>c,u</b> | 0   | 0   | 2 | 5  | 7  | 0    | 1  | 8  | 0   | 145 |
| <b>c,v</b> | 0   | 0   | 0 | 0  | 0  | 0    | 0  | 0  | 0   | 0   |
| <b>c,w</b> | 0   | 0   | 0 | 0  | 0  | 0    | 0  | 0  | 0   | 0   |
| <b>c,x</b> | 0   | 0   | 0 | 0  | 0  | 0    | 0  | 0  | 0   | 0   |
| <b>c,y</b> | 0   | 0   | 0 | 0  | 0  | 0    | 0  | 0  | 0   | 0   |
| <b>c,z</b> | 0   | 0   | 0 | 0  | 0  | 0    | 0  | 0  | 0   | 0   |

**Trigrammi – 11/81**

|            | <b>j</b> | <b>k</b> | <b>l</b> | <b>m</b> | <b>n</b> | <b>o</b> | <b>p</b> | <b>q</b> | <b>r</b> | <b>s</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>c,_</b> | 0        | 0        | 8        | 2        | 4        | 1        | 10       | 3        | 2        | 3        |
| <b>c,a</b> | 2        | 0        | 129      | 147      | 163      | 1        | 301      | 0        | 257      | 261      |
| <b>c,b</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,c</b> | 0        | 0        | 0        | 0        | 0        | 356      | 0        | 0        | 3        | 0        |
| <b>c,d</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,e</b> | 0        | 0        | 31       | 14       | 190      | 0        | 11       | 0        | 469      | 97       |
| <b>c,f</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,g</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,h</b> | 0        | 0        | 0        | 0        | 0        | 1        | 0        | 0        | 1        | 0        |
| <b>c,i</b> | 0        | 0        | 57       | 22       | 108      | 246      | 46       | 0        | 34       | 67       |
| <b>c,j</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,l</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,m</b> | 0        | 0        | 0        | 0        | 0        | 0        | 1        | 0        | 0        | 0        |
| <b>c,n</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,o</b> | 0        | 0        | 425      | 879      | 1380     | 1        | 74       | 0        | 451      | 538      |
| <b>c,p</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,q</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,r</b> | 0        | 0        | 0        | 0        | 0        | 47       | 0        | 0        | 0        | 0        |
| <b>c,s</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,t</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 2        | 0        |
| <b>c,u</b> | 0        | 0        | 6        | 8        | 92       | 53       | 14       | 0        | 109      | 85       |
| <b>c,v</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |



**Trigrammi – 12/81**

|            | <b>t</b> | <b>u</b> | <b>v</b> | <b>w</b> | <b>x</b> | <b>y</b> | <b>z</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|
| <b>c,_</b> | 6        | 6        | 2        | 0        | 0        | 0        | 0        |
| <b>c,a</b> | 206      | 12       | 87       | 0        | 0        | 0        | 8        |
| <b>c,b</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,c</b> | 0        | 17       | 0        | 0        | 0        | 0        | 0        |
| <b>c,d</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,e</b> | 13       | 0        | 147      | 0        | 0        | 0        | 6        |
| <b>c,f</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,g</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,h</b> | 1        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,i</b> | 102      | 53       | 28       | 0        | 0        | 0        | 7        |
| <b>c,j</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,l</b> | 0        | 19       | 0        | 0        | 0        | 0        | 0        |
| <b>c,m</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,n</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,o</b> | 16       | 0        | 6        | 0        | 0        | 0        | 2        |
| <b>c,p</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,q</b> | 0        | 45       | 0        | 0        | 0        | 0        | 0        |
| <b>c,r</b> | 1        | 28       | 0        | 0        | 0        | 0        | 0        |
| <b>c,s</b> | 1        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,t</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,u</b> | 15       | 0        | 0        | 0        | 0        | 0        | 1        |
| <b>c,v</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>c,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |

**Trigrammi – 13/81**

|     | _    | a  | b  | c   | d  | e   | f  | g  | h | i   |
|-----|------|----|----|-----|----|-----|----|----|---|-----|
| d,_ | 17   | 76 | 3  | 8   | 1  | 56  | 2  | 0  | 0 | 10  |
| d,a | 706  | 0  | 11 | 25  | 18 | 0   | 4  | 32 | 0 | 92  |
| d,b | 0    | 0  | 0  | 0   | 0  | 1   | 0  | 0  | 0 | 0   |
| d,c | 0    | 0  | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| d,d | 0    | 4  | 0  | 0   | 0  | 19  | 0  | 0  | 0 | 35  |
| d,e | 237  | 21 | 38 | 15  | 0  | 6   | 6  | 65 | 0 | 66  |
| d,f | 0    | 0  | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| d,g | 0    | 0  | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| d,h | 0    | 0  | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| d,i | 2140 | 96 | 8  | 242 | 20 | 56  | 41 | 21 | 0 | 6   |
| d,j | 0    | 0  | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| d,k | 0    | 0  | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| d,l | 0    | 0  | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| d,m | 0    | 0  | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| d,n | 0    | 0  | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| d,o | 828  | 0  | 7  | 29  | 19 | 0   | 0  | 36 | 0 | 0   |
| d,p | 0    | 0  | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| d,q | 0    | 0  | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| d,r | 15   | 26 | 0  | 0   | 0  | 124 | 0  | 0  | 0 | 228 |
| d,s | 0    | 0  | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| d,t | 0    | 0  | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| d,u | 1    | 5  | 35 | 19  | 0  | 175 | 1  | 3  | 0 | 0   |
| d,v | 0    | 2  | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| d,w | 0    | 0  | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| d,x | 0    | 0  | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| d,y | 0    | 0  | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| d,z | 0    | 0  | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |

**Trigrammi – 14/81**

|            | <b>j</b> | <b>k</b> | <b>l</b> | <b>m</b> | <b>n</b> | <b>o</b> | <b>p</b> | <b>q</b> | <b>r</b> | <b>s</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>d,_</b> | 0        | 0        | 7        | 5        | 0        | 1        | 10       | 0        | 1        | 13       |
| <b>d,a</b> | 2        | 0        | 337      | 38       | 87       | 0        | 23       | 0        | 246      | 17       |
| <b>d,b</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>d,c</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>d,d</b> | 0        | 0        | 0        | 0        | 0        | 35       | 0        | 0        | 1        | 0        |
| <b>d,e</b> | 0        | 0        | 951      | 8        | 224      | 0        | 8        | 0        | 468      | 172      |
| <b>d,f</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>d,g</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>d,h</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>d,i</b> | 0        | 0        | 7        | 78       | 121      | 111      | 10       | 0        | 201      | 323      |
| <b>d,j</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>d,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>d,l</b> | 0        | 0        | 3        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>d,m</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>d,n</b> | 0        | 0        | 0        | 0        | 2        | 0        | 0        | 0        | 0        | 0        |
| <b>d,o</b> | 8        | 0        | 96       | 238      | 146      | 0        | 117      | 0        | 54       | 75       |
| <b>d,p</b> | 0        | 0        | 0        | 0        | 0        | 1        | 0        | 0        | 0        | 0        |
| <b>d,q</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>d,r</b> | 0        | 0        | 0        | 0        | 0        | 38       | 0        | 0        | 0        | 0        |
| <b>d,s</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>d,t</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>d,u</b> | 0        | 0        | 5        | 2        | 225      | 6        | 0        | 0        | 41       | 5        |
| <b>d,v</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>d,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>d,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>d,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>d,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |

**Trigrammi – 15/81**

|            | t   | u  | v   | w | x | y | z  |
|------------|-----|----|-----|---|---|---|----|
| <b>d,_</b> | 0   | 2  | 3   | 0 | 0 | 0 | 0  |
| <b>d,a</b> | 132 | 11 | 193 | 0 | 0 | 0 | 2  |
| <b>d,b</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>d,c</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>d,d</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>d,e</b> | 101 | 0  | 185 | 0 | 0 | 0 | 44 |
| <b>d,f</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>d,g</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>d,h</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>d,i</b> | 103 | 3  | 94  | 0 | 0 | 0 | 38 |
| <b>d,j</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>d,k</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>d,l</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>d,m</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>d,n</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>d,o</b> | 44  | 0  | 364 | 0 | 0 | 0 | 4  |
| <b>d,p</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>d,q</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>d,r</b> | 0   | 1  | 0   | 0 | 0 | 0 | 0  |
| <b>d,s</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>d,t</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>d,u</b> | 109 | 0  | 0   | 0 | 0 | 0 | 1  |
| <b>d,v</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>d,w</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>d,x</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>d,y</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>d,z</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |

**Trigrammi – 16/81**

|     | _    | a    | b   | c    | d    | e   | f   | g   | h  | i    |
|-----|------|------|-----|------|------|-----|-----|-----|----|------|
| e,_ | 607  | 1546 | 196 | 1575 | 1524 | 781 | 391 | 341 | 75 | 1065 |
| e,a | 31   | 0    | 0   | 0    | 2    | 0   | 0   | 0   | 0  | 0    |
| e,b | 0    | 1    | 365 | 0    | 0    | 1   | 0   | 0   | 0  | 11   |
| e,c | 3    | 96   | 0   | 302  | 0    | 138 | 0   | 0   | 4  | 129  |
| e,d | 50   | 30   | 0   | 0    | 12   | 345 | 0   | 0   | 0  | 178  |
| e,e | 8    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0    |
| e,f | 1    | 8    | 0   | 0    | 0    | 4   | 13  | 0   | 0  | 14   |
| e,g | 10   | 93   | 0   | 0    | 0    | 6   | 0   | 160 | 8  | 20   |
| e,h | 44   | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0    |
| e,i | 748  | 0    | 0   | 2    | 0    | 0   | 0   | 0   | 0  | 0    |
| e,j | 0    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0    |
| e,k | 0    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0    |
| e,l | 818  | 78   | 0   | 1    | 0    | 70  | 0   | 0   | 5  | 101  |
| e,m | 2    | 30   | 36  | 0    | 0    | 115 | 0   | 0   | 0  | 35   |
| e,n | 59   | 184  | 0   | 5    | 532  | 394 | 0   | 19  | 0  | 126  |
| e,o | 12   | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0    |
| e,p | 0    | 12   | 0   | 0    | 0    | 3   | 0   | 0   | 0  | 54   |
| e,q | 0    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0    |
| e,r | 1529 | 1107 | 24  | 319  | 73   | 856 | 10  | 36  | 1  | 352  |
| e,s | 12   | 68   | 0   | 210  | 0    | 245 | 0   | 0   | 0  | 140  |
| e,t | 45   | 49   | 0   | 0    | 0    | 84  | 0   | 0   | 0  | 20   |
| e,u | 2    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 1    |
| e,v | 8    | 955  | 0   | 0    | 0    | 73  | 0   | 0   | 0  | 47   |
| e,w | 1    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0    |
| e,x | 0    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0    |
| e,y | 0    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0    |
| e,z | 26   | 1    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 35   |

**Trigrammi – 17/81**

|     | j | k | l    | m    | n   | o   | p    | q   | r   | s    |
|-----|---|---|------|------|-----|-----|------|-----|-----|------|
| e,_ | 3 | 0 | 1165 | 1020 | 933 | 214 | 1287 | 380 | 282 | 1611 |
| e,a | 0 | 0 | 30   | 5    | 35  | 0   | 0    | 0   | 59  | 0    |
| e,b | 0 | 0 | 0    | 0    | 0   | 4   | 0    | 0   | 16  | 0    |
| e,c | 0 | 0 | 2    | 0    | 0   | 63  | 0    | 0   | 5   | 0    |
| e,d | 0 | 0 | 0    | 0    | 0   | 80  | 0    | 0   | 17  | 0    |
| e,e | 0 | 0 | 0    | 0    | 0   | 0   | 0    | 0   | 0   | 0    |
| e,f | 0 | 0 | 0    | 0    | 0   | 0   | 0    | 0   | 1   | 0    |
| e,g | 0 | 0 | 277  | 0    | 121 | 27  | 0    | 0   | 67  | 0    |
| e,h | 0 | 0 | 0    | 0    | 0   | 0   | 0    | 0   | 0   | 0    |
| e,i | 0 | 0 | 0    | 1    | 6   | 0   | 0    | 0   | 1   | 103  |
| e,j | 0 | 0 | 0    | 0    | 0   | 0   | 0    | 0   | 0   | 0    |
| e,k | 0 | 0 | 0    | 0    | 0   | 0   | 0    | 0   | 0   | 0    |
| e,l | 0 | 0 | 1620 | 60   | 0   | 68  | 0    | 0   | 0   | 3    |
| e,m | 0 | 0 | 0    | 30   | 0   | 60  | 197  | 0   | 0   | 0    |
| e,n | 0 | 0 | 0    | 0    | 97  | 192 | 0    | 0   | 0   | 211  |
| e,o | 0 | 0 | 0    | 0    | 4   | 0   | 1    | 0   | 0   | 4    |
| e,p | 0 | 0 | 3    | 0    | 0   | 15  | 66   | 0   | 2   | 0    |
| e,q | 0 | 0 | 0    | 0    | 0   | 0   | 0    | 0   | 0   | 0    |
| e,r | 0 | 0 | 85   | 207  | 141 | 622 | 22   | 1   | 145 | 168  |
| e,s | 0 | 0 | 0    | 0    | 0   | 93  | 73   | 0   | 0   | 1028 |
| e,t | 0 | 0 | 0    | 0    | 0   | 43  | 0    | 0   | 60  | 0    |
| e,u | 0 | 0 | 3    | 0    | 0   | 0   | 0    | 0   | 2   | 0    |
| e,v | 0 | 0 | 0    | 0    | 0   | 525 | 0    | 0   | 1   | 0    |
| e,w | 0 | 0 | 0    | 0    | 0   | 0   | 0    | 0   | 0   | 0    |
| e,x | 0 | 0 | 0    | 0    | 0   | 0   | 0    | 0   | 0   | 0    |
| e,y | 0 | 0 | 0    | 0    | 0   | 0   | 0    | 0   | 0   | 0    |
| e,z | 0 | 0 | 0    | 0    | 0   | 0   | 0    | 0   | 0   | 0    |

**Trigrammi – 18/81**

|     | t    | u   | v   | w | x | y | z   |
|-----|------|-----|-----|---|---|---|-----|
| e,_ | 383  | 405 | 448 | 0 | 1 | 0 | 16  |
| e,a | 27   | 0   | 0   | 0 | 0 | 0 | 0   |
| e,b | 0    | 0   | 0   | 0 | 0 | 0 | 0   |
| e,c | 0    | 5   | 0   | 0 | 0 | 0 | 0   |
| e,d | 0    | 69  | 0   | 0 | 0 | 0 | 0   |
| e,e | 0    | 0   | 0   | 0 | 0 | 0 | 0   |
| e,f | 0    | 2   | 0   | 0 | 0 | 0 | 0   |
| e,g | 0    | 93  | 0   | 0 | 0 | 0 | 0   |
| e,h | 0    | 0   | 0   | 0 | 0 | 0 | 0   |
| e,i | 2    | 0   | 0   | 0 | 0 | 0 | 0   |
| e,j | 0    | 0   | 0   | 0 | 0 | 0 | 0   |
| e,k | 0    | 0   | 0   | 0 | 0 | 0 | 0   |
| e,l | 12   | 2   | 2   | 0 | 0 | 0 | 0   |
| e,m | 0    | 5   | 0   | 0 | 0 | 0 | 0   |
| e,n | 1700 | 101 | 0   | 0 | 0 | 0 | 442 |
| e,o | 0    | 0   | 0   | 0 | 0 | 0 | 0   |
| e,p | 1    | 1   | 0   | 0 | 0 | 0 | 0   |
| e,q | 0    | 24  | 0   | 0 | 0 | 0 | 0   |
| e,r | 358  | 25  | 132 | 0 | 0 | 0 | 22  |
| e,s | 870  | 12  | 0   | 0 | 0 | 0 | 0   |
| e,t | 889  | 6   | 0   | 0 | 0 | 0 | 0   |
| e,u | 0    | 0   | 0   | 0 | 1 | 0 | 0   |
| e,v | 0    | 13  | 5   | 0 | 0 | 0 | 0   |
| e,w | 1    | 0   | 0   | 0 | 0 | 0 | 0   |
| e,x | 0    | 0   | 0   | 0 | 0 | 0 | 0   |
| e,y | 0    | 0   | 0   | 0 | 0 | 0 | 0   |
| e,z | 0    | 0   | 0   | 0 | 0 | 0 | 206 |

**Trigrammi – 19/81**

|     | _  | a   | b | c   | d  | e  | f | g   | h | i  |
|-----|----|-----|---|-----|----|----|---|-----|---|----|
| f,_ | 1  | 2   | 0 | 0   | 2  | 0  | 0 | 0   | 0 | 1  |
| f,a | 48 | 0   | 4 | 184 | 3  | 2  | 0 | 1   | 0 | 8  |
| f,b | 0  | 0   | 0 | 0   | 0  | 0  | 0 | 0   | 0 | 0  |
| f,c | 0  | 0   | 0 | 0   | 0  | 0  | 0 | 0   | 0 | 0  |
| f,d | 0  | 0   | 0 | 0   | 0  | 0  | 0 | 0   | 0 | 0  |
| f,e | 2  | 0   | 4 | 82  | 17 | 0  | 0 | 3   | 0 | 0  |
| f,f | 13 | 84  | 0 | 1   | 0  | 85 | 1 | 0   | 0 | 83 |
| f,g | 0  | 0   | 0 | 0   | 0  | 0  | 0 | 0   | 0 | 0  |
| f,h | 0  | 0   | 0 | 0   | 0  | 0  | 0 | 0   | 0 | 0  |
| f,i | 18 | 53  | 0 | 75  | 52 | 18 | 0 | 111 | 0 | 2  |
| f,j | 0  | 0   | 0 | 0   | 0  | 0  | 0 | 0   | 0 | 0  |
| f,k | 0  | 0   | 0 | 0   | 0  | 0  | 0 | 0   | 0 | 0  |
| f,l | 0  | 2   | 0 | 0   | 0  | 23 | 0 | 0   | 0 | 11 |
| f,m | 0  | 0   | 0 | 0   | 0  | 0  | 0 | 0   | 0 | 0  |
| f,n | 0  | 0   | 0 | 0   | 0  | 0  | 0 | 0   | 0 | 0  |
| f,o | 21 | 0   | 0 | 15  | 1  | 0  | 0 | 46  | 0 | 0  |
| f,p | 0  | 0   | 0 | 0   | 0  | 0  | 0 | 0   | 0 | 0  |
| f,q | 0  | 0   | 0 | 0   | 0  | 0  | 0 | 0   | 0 | 0  |
| f,r | 0  | 112 | 0 | 0   | 0  | 82 | 0 | 0   | 0 | 34 |
| f,s | 0  | 0   | 0 | 0   | 0  | 0  | 0 | 0   | 0 | 0  |
| f,t | 0  | 0   | 0 | 0   | 0  | 0  | 0 | 0   | 0 | 0  |
| f,u | 58 | 0   | 0 | 0   | 0  | 0  | 0 | 24  | 0 | 13 |
| f,v | 0  | 0   | 0 | 0   | 0  | 0  | 0 | 0   | 0 | 0  |
| f,w | 0  | 0   | 0 | 0   | 0  | 0  | 0 | 0   | 0 | 0  |
| f,x | 0  | 0   | 0 | 0   | 0  | 0  | 0 | 0   | 0 | 0  |
| f,y | 0  | 0   | 0 | 0   | 0  | 0  | 0 | 0   | 0 | 0  |
| f,z | 0  | 0   | 0 | 0   | 0  | 0  | 0 | 0   | 0 | 0  |



**Trigrammi – 20/81**

|     | j | k | l  | m  | n   | o  | p | q | r   | s   |
|-----|---|---|----|----|-----|----|---|---|-----|-----|
| f,_ | 0 | 0 | 1  | 3  | 2   | 1  | 1 | 0 | 1   | 1   |
| f,a | 0 | 0 | 19 | 38 | 68  | 0  | 0 | 0 | 293 | 18  |
| f,b | 0 | 0 | 0  | 0  | 0   | 0  | 0 | 0 | 0   | 0   |
| f,c | 0 | 0 | 0  | 0  | 0   | 1  | 0 | 0 | 0   | 0   |
| f,d | 0 | 0 | 0  | 0  | 0   | 0  | 0 | 0 | 0   | 0   |
| f,e | 0 | 0 | 40 | 3  | 14  | 0  | 0 | 0 | 138 | 44  |
| f,f | 0 | 0 | 12 | 0  | 0   | 28 | 0 | 0 | 65  | 0   |
| f,g | 0 | 0 | 0  | 0  | 0   | 0  | 0 | 0 | 0   | 0   |
| f,h | 0 | 0 | 0  | 0  | 0   | 0  | 0 | 0 | 0   | 0   |
| f,i | 0 | 0 | 40 | 0  | 311 | 20 | 0 | 0 | 8   | 19  |
| f,j | 0 | 0 | 0  | 0  | 0   | 0  | 0 | 0 | 0   | 0   |
| f,k | 0 | 0 | 0  | 0  | 0   | 0  | 0 | 0 | 0   | 0   |
| f,l | 0 | 0 | 0  | 0  | 0   | 5  | 0 | 0 | 0   | 0   |
| f,m | 0 | 0 | 0  | 0  | 0   | 0  | 0 | 0 | 0   | 0   |
| f,n | 0 | 0 | 0  | 0  | 0   | 0  | 0 | 0 | 0   | 0   |
| f,o | 0 | 0 | 14 | 0  | 59  | 0  | 0 | 0 | 394 | 156 |
| f,p | 0 | 0 | 0  | 0  | 0   | 0  | 0 | 0 | 0   | 0   |
| f,q | 0 | 0 | 0  | 0  | 0   | 0  | 0 | 0 | 0   | 0   |
| f,r | 0 | 0 | 0  | 0  | 0   | 54 | 0 | 0 | 0   | 0   |
| f,s | 0 | 0 | 0  | 0  | 0   | 0  | 0 | 0 | 0   | 0   |
| f,t | 0 | 0 | 0  | 0  | 0   | 0  | 0 | 0 | 0   | 0   |
| f,u | 0 | 0 | 3  | 16 | 9   | 54 | 0 | 0 | 65  | 13  |
| f,v | 0 | 0 | 0  | 0  | 0   | 0  | 0 | 0 | 0   | 0   |
| f,w | 0 | 0 | 0  | 0  | 0   | 0  | 0 | 0 | 0   | 0   |
| f,x | 0 | 0 | 0  | 0  | 0   | 0  | 0 | 0 | 0   | 0   |
| f,y | 0 | 0 | 0  | 0  | 0   | 0  | 0 | 0 | 0   | 0   |
| f,z | 0 | 0 | 0  | 0  | 0   | 0  | 0 | 0 | 0   | 0   |

**Trigrammi – 21/81**

|            | t   | u  | v  | w | x | y | z  |
|------------|-----|----|----|---|---|---|----|
| <b>f,_</b> | 0   | 1  | 0  | 0 | 0 | 0 | 0  |
| <b>f,a</b> | 246 | 1  | 23 | 0 | 0 | 0 | 18 |
| <b>f,b</b> | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>f,c</b> | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>f,d</b> | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>f,e</b> | 34  | 0  | 0  | 0 | 0 | 0 | 4  |
| <b>f,f</b> | 0   | 6  | 0  | 0 | 0 | 0 | 0  |
| <b>f,g</b> | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>f,h</b> | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>f,i</b> | 33  | 23 | 0  | 0 | 0 | 0 | 7  |
| <b>f,j</b> | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>f,k</b> | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>f,l</b> | 0   | 3  | 0  | 0 | 0 | 0 | 0  |
| <b>f,m</b> | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>f,n</b> | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>f,o</b> | 1   | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>f,p</b> | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>f,q</b> | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>f,r</b> | 0   | 11 | 0  | 0 | 0 | 0 | 0  |
| <b>f,s</b> | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>f,t</b> | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>f,u</b> | 3   | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>f,v</b> | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>f,w</b> | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>f,x</b> | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>f,y</b> | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>f,z</b> | 0   | 0  | 0  | 0 | 0 | 0 | 0  |

**Trigrammi – 22/81**

|            | _   | a   | b | c  | d  | e   | f | g  | h | i    |
|------------|-----|-----|---|----|----|-----|---|----|---|------|
| <b>g,_</b> | 0   | 1   | 0 | 1  | 1  | 1   | 0 | 1  | 0 | 1    |
| <b>g,a</b> | 66  | 0   | 7 | 1  | 26 | 1   | 0 | 2  | 0 | 7    |
| <b>g,b</b> | 0   | 0   | 0 | 0  | 0  | 0   | 0 | 0  | 0 | 0    |
| <b>g,c</b> | 0   | 0   | 0 | 0  | 0  | 0   | 0 | 0  | 0 | 0    |
| <b>g,d</b> | 0   | 0   | 0 | 0  | 0  | 0   | 0 | 0  | 0 | 0    |
| <b>g,e</b> | 31  | 0   | 0 | 0  | 4  | 0   | 0 | 9  | 0 | 0    |
| <b>g,f</b> | 0   | 0   | 0 | 0  | 0  | 0   | 0 | 0  | 0 | 0    |
| <b>g,g</b> | 0   | 2   | 0 | 0  | 0  | 123 | 0 | 0  | 1 | 278  |
| <b>g,h</b> | 0   | 0   | 0 | 0  | 0  | 30  | 0 | 0  | 0 | 42   |
| <b>g,i</b> | 189 | 164 | 2 | 16 | 3  | 6   | 0 | 21 | 0 | 1    |
| <b>g,j</b> | 0   | 0   | 0 | 0  | 0  | 0   | 0 | 0  | 0 | 0    |
| <b>g,k</b> | 0   | 0   | 0 | 0  | 0  | 0   | 0 | 0  | 0 | 0    |
| <b>g,l</b> | 0   | 0   | 0 | 0  | 0  | 2   | 0 | 0  | 0 | 1286 |
| <b>g,m</b> | 0   | 0   | 0 | 0  | 0  | 0   | 0 | 0  | 0 | 0    |
| <b>g,n</b> | 3   | 218 | 0 | 0  | 0  | 26  | 0 | 0  | 0 | 139  |
| <b>g,o</b> | 123 | 0   | 1 | 0  | 31 | 0   | 4 | 11 | 0 | 0    |
| <b>g,p</b> | 0   | 0   | 0 | 0  | 0  | 0   | 0 | 0  | 0 | 0    |
| <b>g,q</b> | 0   | 0   | 0 | 0  | 0  | 0   | 0 | 0  | 0 | 0    |
| <b>g,r</b> | 2   | 213 | 0 | 0  | 0  | 44  | 0 | 0  | 0 | 110  |
| <b>g,s</b> | 0   | 0   | 0 | 0  | 0  | 0   | 0 | 0  | 0 | 0    |
| <b>g,t</b> | 0   | 0   | 0 | 1  | 0  | 0   | 0 | 0  | 0 | 0    |
| <b>g,u</b> | 6   | 236 | 1 | 0  | 0  | 49  | 0 | 0  | 0 | 68   |
| <b>g,v</b> | 0   | 0   | 0 | 0  | 0  | 0   | 0 | 0  | 0 | 0    |
| <b>g,w</b> | 0   | 0   | 0 | 0  | 0  | 0   | 0 | 0  | 0 | 0    |
| <b>g,x</b> | 0   | 0   | 0 | 0  | 0  | 0   | 0 | 0  | 0 | 0    |
| <b>g,y</b> | 0   | 0   | 0 | 0  | 0  | 0   | 0 | 0  | 0 | 0    |
| <b>g,z</b> | 0   | 0   | 0 | 0  | 0  | 0   | 0 | 0  | 0 | 0    |

**Trigrammi – 23/81**

|            | <b>j</b> | <b>k</b> | <b>l</b> | <b>m</b> | <b>n</b> | <b>o</b> | <b>p</b> | <b>q</b> | <b>r</b> | <b>s</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>g,_</b> | 0        | 0        | 0        | 1        | 0        | 0        | 3        | 1        | 1        | 0        |
| <b>g,a</b> | 1        | 0        | 14       | 26       | 43       | 0        | 0        | 0        | 58       | 10       |
| <b>g,b</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,c</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,d</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,e</b> | 0        | 0        | 15       | 15       | 135      | 0        | 0        | 0        | 134      | 17       |
| <b>g,f</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,g</b> | 0        | 0        | 0        | 0        | 0        | 4        | 0        | 0        | 11       | 0        |
| <b>g,h</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,i</b> | 0        | 0        | 4        | 1        | 85       | 514      | 0        | 0        | 56       | 4        |
| <b>g,j</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,l</b> | 0        | 0        | 0        | 0        | 0        | 2        | 0        | 0        | 0        | 0        |
| <b>g,m</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,n</b> | 0        | 0        | 0        | 0        | 0        | 554      | 0        | 0        | 0        | 0        |
| <b>g,o</b> | 1        | 0        | 45       | 18       | 30       | 0        | 0        | 0        | 24       | 24       |
| <b>g,p</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,q</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,r</b> | 0        | 0        | 0        | 0        | 0        | 40       | 0        | 0        | 0        | 0        |
| <b>g,s</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,t</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,u</b> | 0        | 0        | 1        | 0        | 0        | 1        | 0        | 0        | 43       | 30       |
| <b>g,v</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |

**Trigrammi – 24/81**

|            | <b>t</b> | <b>u</b> | <b>v</b> | <b>w</b> | <b>x</b> | <b>y</b> | <b>z</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|
| <b>g,_</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,a</b> | 48       | 0        | 14       | 0        | 0        | 0        | 32       |
| <b>g,b</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,c</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,d</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,e</b> | 24       | 0        | 56       | 0        | 0        | 0        | 2        |
| <b>g,f</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,g</b> | 0        | 1        | 0        | 0        | 0        | 0        | 0        |
| <b>g,h</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,i</b> | 32       | 133      | 10       | 0        | 0        | 0        | 0        |
| <b>g,j</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,l</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,m</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,n</b> | 0        | 15       | 0        | 0        | 0        | 0        | 0        |
| <b>g,o</b> | 7        | 0        | 9        | 0        | 0        | 0        | 6        |
| <b>g,p</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,q</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,r</b> | 0        | 4        | 0        | 0        | 0        | 0        | 0        |
| <b>g,s</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,t</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,u</b> | 3        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,v</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>g,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |

**Trigrammi – 25/81**

|            | _    | a   | b  | c  | d  | e  | f | g  | h | i  |
|------------|------|-----|----|----|----|----|---|----|---|----|
| <b>h,_</b> | 27   | 30  | 11 | 21 | 36 | 20 | 5 | 14 | 3 | 37 |
| <b>h,a</b> | 125  | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 32 |
| <b>h,b</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |
| <b>h,c</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |
| <b>h,d</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |
| <b>h,e</b> | 2356 | 0   | 0  | 2  | 0  | 0  | 0 | 31 | 0 | 8  |
| <b>h,f</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |
| <b>h,g</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |
| <b>h,h</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |
| <b>h,i</b> | 377  | 186 | 1  | 0  | 0  | 85 | 2 | 2  | 0 | 1  |
| <b>h,j</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |
| <b>h,k</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |
| <b>h,l</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |
| <b>h,m</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |
| <b>h,n</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |
| <b>h,o</b> | 116  | 0   | 0  | 1  | 1  | 0  | 1 | 0  | 0 | 0  |
| <b>h,p</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |
| <b>h,q</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |
| <b>h,r</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 1  |
| <b>h,s</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |
| <b>h,t</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |
| <b>h,u</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |
| <b>h,v</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |
| <b>h,w</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |
| <b>h,x</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |
| <b>h,y</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |
| <b>h,z</b> | 0    | 0   | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0  |

**Trigrammi – 26/81**

|            | <b>j</b> | <b>k</b> | <b>l</b> | <b>m</b> | <b>n</b> | <b>o</b> | <b>p</b> | <b>q</b> | <b>r</b> | <b>s</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>h,_</b> | 0        | 0        | 36       | 40       | 43       | 8        | 39       | 10       | 8        | 49       |
| <b>h,a</b> | 0        | 0        | 0        | 0        | 30       | 0        | 0        | 0        | 0        | 0        |
| <b>h,b</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>h,c</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>h,d</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>h,e</b> | 0        | 0        | 22       | 0        | 0        | 0        | 0        | 0        | 85       | 53       |
| <b>h,f</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>h,g</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>h,h</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>h,i</b> | 0        | 0        | 3        | 6        | 48       | 204      | 0        | 0        | 2        | 8        |
| <b>h,j</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>h,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>h,l</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>h,m</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>h,n</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>h,o</b> | 0        | 0        | 0        | 3        | 0        | 0        | 0        | 0        | 1        | 3        |
| <b>h,p</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>h,q</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>h,r</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>h,s</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>h,t</b> | 0        | 0        | 0        | 0        | 0        | 1        | 0        | 0        | 0        | 0        |
| <b>h,u</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>h,v</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>h,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>h,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>h,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>h,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |

**Trigrammi – 27/81**

|            | t  | u  | v  | w | x | y | z  |
|------------|----|----|----|---|---|---|----|
| <b>h,_</b> | 15 | 5  | 17 | 0 | 0 | 0 | 1  |
| <b>h,a</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,b</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,c</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,d</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,e</b> | 12 | 0  | 2  | 0 | 0 | 0 | 14 |
| <b>h,f</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,g</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,h</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,i</b> | 8  | 54 | 4  | 0 | 0 | 0 | 3  |
| <b>h,j</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,k</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,l</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,m</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,n</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,o</b> | 1  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,p</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,q</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,r</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,s</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,t</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,u</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,v</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,w</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,x</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,y</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |
| <b>h,z</b> | 0  | 0  | 0  | 0 | 0 | 0 | 0  |



**Trigrammi – 28/81**

|     | _    | a    | b   | c    | d    | e   | f   | g   | h  | i   |
|-----|------|------|-----|------|------|-----|-----|-----|----|-----|
| i,_ | 397  | 1212 | 168 | 1240 | 1062 | 592 | 559 | 302 | 55 | 526 |
| i,a | 1399 | 0    | 10  | 137  | 1    | 0   | 6   | 46  | 0  | 40  |
| i,b | 1    | 13   | 1   | 0    | 0    | 86  | 0   | 0   | 0  | 84  |
| i,c | 3    | 276  | 0   | 141  | 0    | 171 | 0   | 0   | 95 | 207 |
| i,d | 17   | 141  | 0   | 0    | 2    | 221 | 0   | 0   | 0  | 119 |
| i,e | 301  | 0    | 1   | 18   | 67   | 0   | 0   | 46  | 0  | 61  |
| i,f | 2    | 17   | 0   | 0    | 0    | 28  | 31  | 0   | 0  | 41  |
| i,g | 0    | 20   | 0   | 0    | 0    | 8   | 0   | 6   | 5  | 74  |
| i,h | 1    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 1   |
| i,i | 96   | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 5   |
| i,j | 0    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0   |
| i,k | 0    | 0    | 0   | 0    | 0    | 3   | 0   | 0   | 0  | 0   |
| i,l | 1183 | 56   | 0   | 0    | 66   | 235 | 0   | 0   | 0  | 128 |
| i,m | 9    | 373  | 46  | 0    | 0    | 209 | 0   | 0   | 0  | 100 |
| i,n | 980  | 456  | 0   | 187  | 107  | 243 | 93  | 133 | 0  | 186 |
| i,o | 1804 | 0    | 1   | 43   | 4    | 0   | 0   | 10  | 0  | 0   |
| i,p | 0    | 23   | 0   | 0    | 0    | 55  | 0   | 0   | 0  | 42  |
| i,q | 0    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0   |
| i,r | 85   | 152  | 3   | 29   | 0    | 308 | 0   | 14  | 0  | 73  |
| i,s | 106  | 52   | 3   | 118  | 1    | 97  | 12  | 21  | 0  | 84  |
| i,t | 199  | 475  | 0   | 0    | 0    | 78  | 0   | 0   | 0  | 94  |
| i,u | 0    | 0    | 1   | 3    | 37   | 0   | 0   | 4   | 0  | 0   |
| i,v | 4    | 246  | 0   | 0    | 0    | 173 | 0   | 0   | 0  | 62  |
| i,w | 0    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0   |
| i,x | 2    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0   |
| i,y | 0    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0   |
| i,z | 1    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 162 |

**Trigrammi – 29/81**

|            | <b>j</b> | <b>k</b> | <b>l</b> | <b>m</b> | <b>n</b> | <b>o</b> | <b>p</b> | <b>q</b> | <b>r</b> | <b>s</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>i,_</b> | 0        | 0        | 631      | 700      | 457      | 280      | 1057     | 394      | 444      | 1366     |
| <b>i,a</b> | 9        | 0        | 95       | 263      | 601      | 0        | 5        | 0        | 209      | 21       |
| <b>i,b</b> | 0        | 0        | 44       | 0        | 0        | 11       | 0        | 0        | 64       | 0        |
| <b>i,c</b> | 0        | 0        | 0        | 0        | 0        | 286      | 0        | 0        | 2        | 0        |
| <b>i,d</b> | 0        | 0        | 0        | 0        | 0        | 70       | 0        | 0        | 0        | 0        |
| <b>i,e</b> | 0        | 0        | 53       | 22       | 212      | 0        | 0        | 0        | 214      | 32       |
| <b>i,f</b> | 0        | 0        | 22       | 0        | 0        | 4        | 0        | 0        | 0        | 0        |
| <b>i,g</b> | 0        | 0        | 261      | 0        | 402      | 26       | 0        | 0        | 4        | 0        |
| <b>i,h</b> | 0        | 0        | 0        | 0        | 0        | 1        | 0        | 0        | 0        | 0        |
| <b>i,i</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>i,j</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>i,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>i,l</b> | 0        | 0        | 103      | 26       | 0        | 23       | 0        | 0        | 0        | 0        |
| <b>i,m</b> | 0        | 0        | 0        | 64       | 0        | 280      | 229      | 0        | 0        | 0        |
| <b>i,n</b> | 0        | 0        | 0        | 0        | 70       | 473      | 0        | 37       | 0        | 133      |
| <b>i,o</b> | 17       | 0        | 62       | 10       | 680      | 0        | 6        | 0        | 235      | 161      |
| <b>i,p</b> | 0        | 0        | 4        | 0        | 0        | 32       | 5        | 0        | 41       | 4        |
| <b>i,q</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>i,r</b> | 0        | 0        | 40       | 32       | 10       | 43       | 0        | 0        | 30       | 7        |
| <b>i,s</b> | 0        | 0        | 2        | 4        | 0        | 182      | 197      | 0        | 0        | 359      |
| <b>i,t</b> | 0        | 0        | 0        | 0        | 0        | 446      | 0        | 0        | 45       | 0        |
| <b>i,u</b> | 0        | 0        | 8        | 21       | 50       | 63       | 2        | 0        | 22       | 88       |
| <b>i,v</b> | 0        | 0        | 0        | 0        | 0        | 160      | 0        | 0        | 3        | 0        |
| <b>i,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>i,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>i,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>i,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |

**Trigrammi – 30/81**

|            | <b>t</b> | <b>u</b> | <b>v</b> | <b>w</b> | <b>x</b> | <b>y</b> | <b>z</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|
| <b>i,_</b> | 470      | 227      | 406      | 0        | 0        | 0        | 5        |
| <b>i,a</b> | 196      | 0        | 92       | 0        | 0        | 0        | 9        |
| <b>i,b</b> | 0        | 6        | 0        | 0        | 0        | 0        | 0        |
| <b>i,c</b> | 0        | 36       | 0        | 0        | 0        | 0        | 0        |
| <b>i,d</b> | 0        | 15       | 0        | 0        | 0        | 0        | 0        |
| <b>i,e</b> | 147      | 3        | 37       | 0        | 0        | 0        | 0        |
| <b>i,f</b> | 0        | 1        | 0        | 0        | 0        | 0        | 0        |
| <b>i,g</b> | 0        | 37       | 0        | 0        | 0        | 0        | 0        |
| <b>i,h</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>i,i</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>i,j</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>i,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>i,l</b> | 0        | 6        | 13       | 0        | 0        | 0        | 2        |
| <b>i,m</b> | 0        | 3        | 0        | 0        | 0        | 0        | 0        |
| <b>i,n</b> | 303      | 55       | 130      | 0        | 0        | 0        | 23       |
| <b>i,o</b> | 51       | 0        | 44       | 0        | 0        | 0        | 8        |
| <b>i,p</b> | 1        | 2        | 0        | 0        | 0        | 0        | 0        |
| <b>i,q</b> | 0        | 5        | 0        | 0        | 0        | 0        | 0        |
| <b>i,r</b> | 10       | 0        | 2        | 0        | 0        | 0        | 0        |
| <b>i,s</b> | 253      | 9        | 0        | 0        | 0        | 0        | 0        |
| <b>i,t</b> | 162      | 55       | 0        | 0        | 0        | 0        | 3        |
| <b>i,u</b> | 73       | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>i,v</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>i,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>i,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>i,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>i,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 51       |

**Trigrammi – 31/81**

|     | _   | a | b | c | d | e | f | g | h | i |
|-----|-----|---|---|---|---|---|---|---|---|---|
| j,_ | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,a | 39  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,b | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,c | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,d | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,e | 4   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,f | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,g | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,h | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,i | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,j | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,k | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,l | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,m | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,n | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,o | 101 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,p | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,q | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,r | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,s | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,t | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,u | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,v | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,w | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,x | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,y | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,z | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Trigrammi – 32/81**

|            | <b>j</b> | <b>k</b> | <b>l</b> | <b>m</b> | <b>n</b> | <b>o</b> | <b>p</b> | <b>q</b> | <b>r</b> | <b>s</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>j,_</b> | 0        | 0        | 0        | 1        | 0        | 0        | 0        | 0        | 0        | 3        |
| <b>j,a</b> | 0        | 0        | 0        | 1        | 1        | 0        | 0        | 0        | 0        | 0        |
| <b>j,b</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,c</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,d</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,e</b> | 0        | 0        | 0        | 0        | 1        | 0        | 0        | 0        | 6        | 0        |
| <b>j,f</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,g</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,h</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,i</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,j</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,l</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,m</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,n</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,o</b> | 0        | 0        | 5        | 0        | 3        | 0        | 0        | 0        | 0        | 4        |
| <b>j,p</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,q</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,r</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,s</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,t</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,u</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,v</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>j,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |

**Trigrammi – 33/81**

|     | t  | u | v | w | x | y | z |
|-----|----|---|---|---|---|---|---|
| j,_ | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,a | 3  | 0 | 3 | 0 | 0 | 0 | 0 |
| j,b | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,c | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,d | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,e | 2  | 3 | 0 | 0 | 0 | 0 | 1 |
| j,f | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,g | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,h | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,i | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,j | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,k | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,l | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,m | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,n | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,o | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,p | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,q | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,r | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,s | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,t | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,u | 21 | 0 | 0 | 0 | 0 | 0 | 0 |
| j,v | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,w | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,x | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,y | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| j,z | 0  | 0 | 0 | 0 | 0 | 0 | 0 |

**Trigrammi – 34/81**

|     | _ | a | b | c | d | e | f | g | h | i |
|-----|---|---|---|---|---|---|---|---|---|---|
| k,_ | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| k,a | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,b | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,c | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,d | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,e | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,f | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,g | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,i | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,j | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,k | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,l | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,m | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,n | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,o | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,p | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,q | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,r | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,s | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,t | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,u | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,v | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,w | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,x | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,y | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Trigrammi – 35/81**

|     | j | k | l | m | n | o | p | q | r | s |
|-----|---|---|---|---|---|---|---|---|---|---|
| k,_ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| k,b | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,c | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,d | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,e | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,f | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,g | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,i | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,j | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,k | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,l | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,m | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,n | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,o | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,p | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,q | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,r | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,s | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,t | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,u | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,v | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,w | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,x | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,y | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



**Trigrammi – 36/81**

|     | t | u | v | w | x | y | z |
|-----|---|---|---|---|---|---|---|
| k,_ | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,a | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,b | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,c | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,d | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,e | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,f | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,g | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,h | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,i | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,j | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,k | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,l | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,m | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,n | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,o | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,p | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,q | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,r | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,s | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,t | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,u | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,v | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,w | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,x | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,y | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| k,z | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Trigrammi – 37/81**

|            | _    | a    | b   | c   | d   | e   | f   | g   | h   | i   |
|------------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>l,_</b> | 48   | 44   | 151 | 382 | 143 | 31  | 172 | 111 | 3   | 29  |
| <b>l,a</b> | 3239 | 0    | 45  | 50  | 30  | 0   | 10  | 72  | 0   | 15  |
| <b>l,b</b> | 0    | 3    | 0   | 0   | 0   | 29  | 0   | 0   | 0   | 1   |
| <b>l,c</b> | 0    | 5    | 0   | 0   | 0   | 8   | 0   | 0   | 129 | 5   |
| <b>l,d</b> | 0    | 71   | 0   | 0   | 0   | 27  | 0   | 0   | 0   | 5   |
| <b>l,e</b> | 1683 | 60   | 4   | 6   | 9   | 0   | 2   | 148 | 0   | 291 |
| <b>l,f</b> | 0    | 1    | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 1   |
| <b>l,g</b> | 0    | 5    | 0   | 0   | 0   | 20  | 0   | 0   | 0   | 1   |
| <b>l,h</b> | 0    | 17   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| <b>l,i</b> | 1022 | 211  | 127 | 86  | 35  | 287 | 1   | 63  | 0   | 1   |
| <b>l,j</b> | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| <b>l,k</b> | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| <b>l,l</b> | 12   | 1618 | 0   | 0   | 0   | 440 | 0   | 0   | 1   | 248 |
| <b>l,m</b> | 0    | 10   | 0   | 0   | 0   | 140 | 0   | 0   | 0   | 6   |
| <b>l,n</b> | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| <b>l,o</b> | 979  | 1    | 7   | 31  | 20  | 0   | 0   | 43  | 0   | 0   |
| <b>l,p</b> | 0    | 28   | 0   | 0   | 0   | 7   | 0   | 0   | 0   | 22  |
| <b>l,q</b> | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| <b>l,r</b> | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| <b>l,s</b> | 0    | 4    | 0   | 0   | 0   | 25  | 0   | 0   | 0   | 15  |
| <b>l,t</b> | 41   | 200  | 0   | 0   | 0   | 44  | 0   | 0   | 0   | 48  |
| <b>l,u</b> | 1    | 0    | 6   | 45  | 5   | 0   | 3   | 4   | 0   | 175 |
| <b>l,v</b> | 1    | 17   | 0   | 0   | 0   | 16  | 0   | 0   | 0   | 12  |
| <b>l,w</b> | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| <b>l,x</b> | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| <b>l,y</b> | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| <b>l,z</b> | 19   | 51   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   |

**Trigrammi – 38/81**

|     | j | k | l   | m   | n   | o   | p   | q  | r   | s   |
|-----|---|---|-----|-----|-----|-----|-----|----|-----|-----|
| l,_ | 0 | 1 | 114 | 421 | 133 | 0   | 421 | 46 | 124 | 348 |
| l,a | 3 | 0 | 79  | 129 | 174 | 0   | 14  | 1  | 176 | 154 |
| l,b | 0 | 0 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   |
| l,c | 0 | 0 | 0   | 0   | 0   | 8   | 0   | 0  | 0   | 0   |
| l,d | 0 | 0 | 0   | 0   | 0   | 2   | 0   | 0  | 0   | 0   |
| l,e | 0 | 0 | 5   | 6   | 131 | 6   | 3   | 2  | 56  | 95  |
| l,f | 0 | 0 | 0   | 0   | 0   | 1   | 0   | 0  | 0   | 0   |
| l,g | 0 | 0 | 0   | 0   | 0   | 2   | 0   | 0  | 0   | 0   |
| l,h | 0 | 0 | 0   | 0   | 0   | 20  | 0   | 0  | 0   | 0   |
| l,i | 0 | 0 | 5   | 78  | 191 | 232 | 9   | 3  | 62  | 39  |
| l,j | 0 | 0 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   |
| l,k | 0 | 0 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   |
| l,l | 0 | 0 | 0   | 0   | 0   | 487 | 0   | 0  | 0   | 0   |
| l,m | 0 | 0 | 0   | 0   | 0   | 68  | 0   | 0  | 0   | 0   |
| l,n | 0 | 0 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   |
| l,o | 0 | 1 | 2   | 32  | 96  | 0   | 10  | 7  | 334 | 36  |
| l,p | 0 | 0 | 0   | 0   | 0   | 9   | 0   | 0  | 0   | 0   |
| l,q | 0 | 0 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   |
| l,r | 0 | 0 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   |
| l,s | 0 | 0 | 0   | 0   | 0   | 10  | 0   | 0  | 0   | 0   |
| l,t | 0 | 0 | 0   | 0   | 0   | 120 | 0   | 0  | 389 | 0   |
| l,u | 0 | 0 | 10  | 40  | 94  | 67  | 2   | 0  | 1   | 64  |
| l,v | 0 | 0 | 0   | 0   | 0   | 11  | 0   | 0  | 0   | 0   |
| l,w | 0 | 0 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   |
| l,x | 0 | 0 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   |
| l,y | 0 | 0 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   |
| l,z | 0 | 0 | 0   | 0   | 0   | 12  | 0   | 0  | 0   | 0   |

**Trigrammi – 39/81**

|            | t   | u  | v   | w | x | y | z  |
|------------|-----|----|-----|---|---|---|----|
| <b>l,_</b> | 158 | 5  | 134 | 0 | 1 | 0 | 1  |
| <b>l,a</b> | 109 | 12 | 104 | 0 | 0 | 0 | 22 |
| <b>l,b</b> | 0   | 1  | 0   | 0 | 0 | 0 | 0  |
| <b>l,c</b> | 0   | 80 | 0   | 0 | 0 | 0 | 0  |
| <b>l,d</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>l,e</b> | 162 | 0  | 136 | 0 | 0 | 0 | 11 |
| <b>l,f</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>l,g</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>l,h</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>l,i</b> | 118 | 40 | 40  | 0 | 0 | 0 | 17 |
| <b>l,j</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>l,k</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>l,l</b> | 0   | 87 | 0   | 0 | 0 | 0 | 0  |
| <b>l,m</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>l,n</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>l,o</b> | 20  | 0  | 0   | 0 | 0 | 0 | 2  |
| <b>l,p</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>l,q</b> | 0   | 3  | 0   | 0 | 0 | 0 | 0  |
| <b>l,r</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>l,s</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>l,t</b> | 0   | 9  | 0   | 0 | 0 | 0 | 0  |
| <b>l,u</b> | 115 | 0  | 0   | 0 | 0 | 0 | 9  |
| <b>l,v</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>l,w</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>l,x</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>l,y</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>l,z</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |

**Trigrammi – 40/81**

|            | _    | a   | b  | c  | d   | e   | f  | g  | h | i   |
|------------|------|-----|----|----|-----|-----|----|----|---|-----|
| <b>m,_</b> | 5    | 9   | 5  | 11 | 3   | 7   | 3  | 5  | 1 | 13  |
| <b>m,a</b> | 1077 | 0   | 7  | 41 | 72  | 11  | 12 | 80 | 9 | 179 |
| <b>m,b</b> | 0    | 35  | 0  | 0  | 0   | 44  | 0  | 0  | 0 | 57  |
| <b>m,c</b> | 0    | 0   | 0  | 0  | 0   | 0   | 0  | 0  | 0 | 0   |
| <b>m,d</b> | 0    | 0   | 0  | 0  | 0   | 0   | 0  | 0  | 0 | 0   |
| <b>m,e</b> | 1137 | 1   | 4  | 7  | 39  | 0   | 0  | 51 | 0 | 104 |
| <b>m,f</b> | 0    | 0   | 0  | 0  | 0   | 0   | 0  | 0  | 0 | 0   |
| <b>m,g</b> | 0    | 0   | 0  | 0  | 0   | 0   | 0  | 0  | 0 | 0   |
| <b>m,h</b> | 0    | 12  | 0  | 0  | 0   | 0   | 0  | 0  | 0 | 0   |
| <b>m,i</b> | 1510 | 338 | 0  | 69 | 23  | 104 | 3  | 55 | 1 | 2   |
| <b>m,j</b> | 0    | 0   | 0  | 0  | 0   | 0   | 0  | 0  | 0 | 0   |
| <b>m,k</b> | 0    | 0   | 0  | 0  | 0   | 0   | 0  | 0  | 0 | 0   |
| <b>m,l</b> | 0    | 0   | 0  | 0  | 0   | 1   | 0  | 0  | 0 | 0   |
| <b>m,m</b> | 1    | 134 | 0  | 0  | 0   | 55  | 0  | 1  | 0 | 59  |
| <b>m,n</b> | 0    | 0   | 0  | 0  | 0   | 0   | 0  | 0  | 0 | 0   |
| <b>m,o</b> | 649  | 0   | 13 | 13 | 100 | 0   | 1  | 95 | 0 | 0   |
| <b>m,p</b> | 0    | 143 | 0  | 0  | 0   | 88  | 0  | 0  | 0 | 108 |
| <b>m,q</b> | 0    | 0   | 0  | 0  | 0   | 0   | 0  | 0  | 0 | 0   |
| <b>m,r</b> | 0    | 0   | 0  | 0  | 0   | 0   | 0  | 0  | 0 | 0   |
| <b>m,s</b> | 1    | 0   | 0  | 0  | 0   | 0   | 0  | 0  | 0 | 0   |
| <b>m,t</b> | 0    | 1   | 0  | 0  | 0   | 0   | 0  | 0  | 1 | 0   |
| <b>m,u</b> | 0    | 0   | 0  | 6  | 0   | 1   | 1  | 7  | 0 | 0   |
| <b>m,v</b> | 0    | 0   | 0  | 0  | 0   | 0   | 0  | 0  | 0 | 0   |
| <b>m,w</b> | 0    | 0   | 0  | 0  | 0   | 0   | 0  | 0  | 0 | 0   |
| <b>m,x</b> | 0    | 0   | 0  | 0  | 0   | 0   | 0  | 0  | 0 | 0   |
| <b>m,y</b> | 0    | 0   | 0  | 0  | 0   | 0   | 0  | 0  | 0 | 0   |
| <b>m,z</b> | 0    | 0   | 0  | 0  | 0   | 0   | 0  | 0  | 0 | 0   |

**Trigrammi – 41/81**

|     | j | k | l   | m  | n   | o   | p | q | r   | s   |
|-----|---|---|-----|----|-----|-----|---|---|-----|-----|
| m,_ | 0 | 0 | 7   | 2  | 4   | 1   | 9 | 2 | 0   | 2   |
| m,a | 7 | 0 | 167 | 71 | 543 | 0   | 6 | 0 | 206 | 79  |
| m,b | 0 | 0 | 0   | 0  | 0   | 18  | 0 | 0 | 95  | 0   |
| m,c | 0 | 0 | 0   | 0  | 0   | 0   | 0 | 0 | 0   | 0   |
| m,d | 0 | 0 | 0   | 0  | 0   | 0   | 0 | 0 | 0   | 0   |
| m,e | 0 | 0 | 36  | 18 | 978 | 0   | 0 | 0 | 226 | 129 |
| m,f | 0 | 0 | 0   | 0  | 0   | 0   | 0 | 0 | 0   | 0   |
| m,g | 0 | 0 | 1   | 0  | 0   | 0   | 0 | 0 | 0   | 0   |
| m,h | 0 | 0 | 0   | 0  | 0   | 1   | 0 | 0 | 0   | 0   |
| m,i | 0 | 0 | 134 | 17 | 284 | 241 | 0 | 0 | 63  | 113 |
| m,j | 0 | 0 | 0   | 0  | 0   | 0   | 0 | 0 | 0   | 0   |
| m,k | 0 | 0 | 0   | 0  | 0   | 0   | 0 | 0 | 0   | 0   |
| m,l | 0 | 0 | 0   | 0  | 0   | 0   | 0 | 0 | 0   | 0   |
| m,m | 0 | 0 | 0   | 0  | 0   | 51  | 0 | 0 | 0   | 0   |
| m,n | 0 | 0 | 0   | 0  | 0   | 0   | 0 | 0 | 0   | 0   |
| m,o | 0 | 0 | 97  | 62 | 102 | 0   | 0 | 0 | 284 | 86  |
| m,p | 0 | 0 | 17  | 0  | 0   | 152 | 0 | 0 | 184 | 0   |
| m,q | 0 | 0 | 0   | 0  | 0   | 0   | 0 | 0 | 0   | 0   |
| m,r | 0 | 0 | 0   | 0  | 0   | 0   | 0 | 0 | 0   | 0   |
| m,s | 0 | 0 | 0   | 1  | 0   | 0   | 0 | 0 | 0   | 0   |
| m,t | 0 | 0 | 0   | 0  | 0   | 0   | 0 | 0 | 0   | 0   |
| m,u | 0 | 0 | 16  | 0  | 41  | 7   | 0 | 0 | 12  | 13  |
| m,v | 0 | 0 | 0   | 0  | 0   | 0   | 0 | 0 | 0   | 0   |
| m,w | 0 | 0 | 0   | 0  | 0   | 0   | 0 | 0 | 0   | 0   |
| m,x | 0 | 0 | 0   | 0  | 0   | 0   | 0 | 0 | 0   | 0   |
| m,y | 0 | 0 | 0   | 0  | 0   | 0   | 0 | 0 | 0   | 0   |
| m,z | 0 | 0 | 0   | 0  | 0   | 0   | 0 | 0 | 0   | 0   |

**Trigrammi – 42/81**

|     | t   | u | v  | w | x  | y | z  |
|-----|-----|---|----|---|----|---|----|
| m,_ | 2   | 0 | 1  | 0 | 0  | 0 | 0  |
| m,a | 208 | 0 | 66 | 0 | 36 | 0 | 20 |
| m,b | 0   | 2 | 0  | 0 | 0  | 0 | 0  |
| m,c | 0   | 0 | 0  | 0 | 0  | 0 | 0  |
| m,d | 0   | 0 | 0  | 0 | 0  | 0 | 0  |
| m,e | 109 | 0 | 17 | 0 | 0  | 0 | 47 |
| m,f | 0   | 0 | 0  | 0 | 0  | 0 | 0  |
| m,g | 0   | 0 | 0  | 0 | 0  | 0 | 0  |
| m,h | 0   | 0 | 0  | 0 | 0  | 0 | 0  |
| m,i | 47  | 0 | 4  | 0 | 0  | 0 | 1  |
| m,j | 0   | 0 | 0  | 0 | 0  | 0 | 0  |
| m,k | 0   | 0 | 0  | 0 | 0  | 0 | 0  |
| m,l | 0   | 0 | 0  | 0 | 0  | 0 | 0  |
| m,m | 0   | 4 | 0  | 0 | 0  | 0 | 0  |
| m,n | 0   | 0 | 0  | 0 | 0  | 0 | 0  |
| m,o | 5   | 2 | 4  | 0 | 0  | 0 | 8  |
| m,p | 0   | 2 | 0  | 0 | 0  | 0 | 0  |
| m,q | 0   | 0 | 0  | 0 | 0  | 0 | 0  |
| m,r | 0   | 0 | 0  | 0 | 0  | 0 | 0  |
| m,s | 0   | 0 | 0  | 0 | 0  | 0 | 0  |
| m,t | 0   | 0 | 0  | 0 | 0  | 0 | 0  |
| m,u | 15  | 0 | 0  | 0 | 0  | 0 | 1  |
| m,v | 0   | 0 | 0  | 0 | 0  | 0 | 0  |
| m,w | 0   | 0 | 0  | 0 | 0  | 0 | 0  |
| m,x | 0   | 0 | 0  | 0 | 0  | 0 | 0  |
| m,y | 0   | 0 | 0  | 0 | 0  | 0 | 0  |
| m,z | 0   | 0 | 0  | 0 | 0  | 0 | 0  |

**Trigrammi – 43/81**

|     | _    | a   | b   | c   | d   | e    | f   | g   | h   | i   |
|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|
| n,_ | 36   | 329 | 131 | 431 | 164 | 113  | 176 | 179 | 27  | 66  |
| n,a | 1416 | 0   | 7   | 24  | 1   | 0    | 6   | 20  | 0   | 24  |
| n,b | 0    | 6   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| n,c | 4    | 72  | 0   | 0   | 0   | 79   | 0   | 0   | 382 | 113 |
| n,d | 44   | 302 | 0   | 0   | 0   | 305  | 0   | 0   | 0   | 189 |
| n,e | 1352 | 42  | 21  | 18  | 6   | 0    | 6   | 58  | 0   | 26  |
| n,f | 0    | 33  | 0   | 0   | 0   | 37   | 0   | 0   | 0   | 48  |
| n,g | 0    | 56  | 0   | 0   | 0   | 103  | 0   | 0   | 26  | 35  |
| n,h | 0    | 0   | 0   | 0   | 0   | 1    | 0   | 0   | 0   | 0   |
| n,i | 624  | 72  | 3   | 71  | 8   | 73   | 23  | 2   | 0   | 0   |
| n,j | 0    | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| n,k | 0    | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| n,l | 0    | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| n,m | 0    | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 1   |
| n,n | 3    | 157 | 0   | 1   | 0   | 107  | 0   | 0   | 1   | 103 |
| n,o | 2333 | 0   | 5   | 15  | 8   | 0    | 15  | 2   | 0   | 108 |
| n,p | 0    | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| n,q | 2    | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| n,r | 0    | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| n,s | 7    | 131 | 0   | 3   | 0   | 146  | 0   | 0   | 0   | 198 |
| n,t | 31   | 491 | 0   | 0   | 0   | 1128 | 0   | 0   | 0   | 574 |
| n,u | 0    | 19  | 0   | 14  | 3   | 8    | 0   | 1   | 0   | 2   |
| n,v | 0    | 13  | 0   | 0   | 0   | 103  | 0   | 0   | 0   | 36  |
| n,w | 0    | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| n,x | 0    | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| n,y | 0    | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   |
| n,z | 0    | 384 | 0   | 0   | 0   | 33   | 0   | 0   | 0   | 250 |



**Trigrammi – 44/81**

|     | j  | k | l   | m   | n    | o   | p   | q   | r   | s   |
|-----|----|---|-----|-----|------|-----|-----|-----|-----|-----|
| n,_ | 0  | 0 | 347 | 356 | 88   | 53  | 552 | 240 | 92  | 396 |
| n,a | 17 | 0 | 123 | 37  | 117  | 0   | 15  | 0   | 166 | 96  |
| n,b | 0  | 0 | 0   | 0   | 0    | 0   | 0   | 0   | 0   | 0   |
| n,c | 0  | 0 | 17  | 0   | 0    | 199 | 0   | 0   | 10  | 0   |
| n,d | 0  | 0 | 0   | 0   | 0    | 787 | 0   | 0   | 16  | 0   |
| n,e | 0  | 0 | 421 | 16  | 39   | 5   | 31  | 3   | 181 | 133 |
| n,f | 0  | 0 | 2   | 0   | 0    | 24  | 0   | 0   | 11  | 0   |
| n,g | 0  | 0 | 2   | 0   | 0    | 89  | 0   | 0   | 17  | 0   |
| n,h | 0  | 0 | 0   | 0   | 0    | 2   | 0   | 0   | 0   | 0   |
| n,i | 0  | 3 | 5   | 93  | 36   | 46  | 17  | 2   | 40  | 53  |
| n,j | 0  | 0 | 0   | 0   | 0    | 0   | 0   | 0   | 0   | 0   |
| n,k | 0  | 0 | 0   | 0   | 0    | 0   | 0   | 0   | 0   | 0   |
| n,l | 0  | 0 | 0   | 0   | 0    | 0   | 0   | 0   | 0   | 0   |
| n,m | 0  | 0 | 0   | 0   | 0    | 0   | 0   | 0   | 0   | 0   |
| n,n | 0  | 0 | 0   | 0   | 0    | 151 | 0   | 0   | 0   | 0   |
| n,o | 19 | 0 | 18  | 73  | 1407 | 0   | 5   | 0   | 410 | 241 |
| n,p | 0  | 0 | 0   | 0   | 0    | 0   | 0   | 0   | 0   | 0   |
| n,q | 0  | 0 | 0   | 0   | 0    | 0   | 0   | 0   | 0   | 0   |
| n,r | 0  | 0 | 0   | 0   | 0    | 0   | 0   | 0   | 0   | 0   |
| n,s | 0  | 0 | 0   | 0   | 0    | 82  | 2   | 0   | 0   | 1   |
| n,t | 0  | 0 | 1   | 0   | 1    | 869 | 0   | 0   | 262 | 0   |
| n,u | 0  | 0 | 70  | 24  | 42   | 106 | 0   | 0   | 0   | 4   |
| n,v | 0  | 0 | 0   | 0   | 0    | 19  | 0   | 0   | 0   | 0   |
| n,w | 0  | 0 | 0   | 0   | 0    | 0   | 0   | 0   | 0   | 0   |
| n,x | 0  | 0 | 0   | 0   | 0    | 0   | 0   | 0   | 0   | 0   |
| n,y | 0  | 0 | 0   | 0   | 0    | 0   | 0   | 0   | 0   | 0   |
| n,z | 0  | 0 | 0   | 0   | 0    | 38  | 0   | 0   | 0   | 0   |

**Trigrammi – 45/81**

|     | t   | u   | v   | w | x | y | z  |
|-----|-----|-----|-----|---|---|---|----|
| n,_ | 257 | 226 | 146 | 0 | 0 | 0 | 0  |
| n,a | 239 | 6   | 77  | 0 | 0 | 1 | 25 |
| n,b | 0   | 0   | 0   | 0 | 0 | 0 | 0  |
| n,c | 0   | 7   | 0   | 0 | 0 | 0 | 0  |
| n,d | 0   | 32  | 0   | 0 | 0 | 0 | 0  |
| n,e | 59  | 0   | 71  | 2 | 0 | 0 | 12 |
| n,f | 0   | 9   | 0   | 0 | 0 | 0 | 0  |
| n,g | 1   | 33  | 0   | 0 | 0 | 0 | 0  |
| n,h | 0   | 0   | 0   | 0 | 0 | 0 | 0  |
| n,i | 69  | 2   | 47  | 0 | 0 | 0 | 12 |
| n,j | 0   | 0   | 0   | 0 | 0 | 0 | 0  |
| n,k | 0   | 0   | 0   | 0 | 0 | 0 | 0  |
| n,l | 0   | 0   | 0   | 0 | 0 | 0 | 0  |
| n,m | 0   | 0   | 0   | 0 | 0 | 0 | 0  |
| n,n | 0   | 25  | 0   | 0 | 0 | 0 | 0  |
| n,o | 121 | 0   | 16  | 0 | 0 | 0 | 6  |
| n,p | 0   | 0   | 0   | 0 | 0 | 0 | 0  |
| n,q | 0   | 168 | 0   | 0 | 0 | 0 | 0  |
| n,r | 0   | 0   | 0   | 0 | 0 | 0 | 0  |
| n,s | 1   | 15  | 0   | 0 | 0 | 0 | 0  |
| n,t | 0   | 34  | 0   | 0 | 0 | 0 | 6  |
| n,u | 93  | 0   | 9   | 0 | 0 | 0 | 3  |
| n,v | 0   | 6   | 0   | 0 | 0 | 0 | 0  |
| n,w | 0   | 0   | 0   | 0 | 0 | 0 | 0  |
| n,x | 0   | 0   | 0   | 0 | 0 | 0 | 0  |
| n,y | 0   | 0   | 0   | 0 | 0 | 0 | 0  |
| n,z | 0   | 5   | 0   | 0 | 0 | 0 | 0  |

**Trigrammi – 46/81**

|            | _    | a    | b   | c    | d    | e   | f   | g   | h  | i    |
|------------|------|------|-----|------|------|-----|-----|-----|----|------|
| <b>o,_</b> | 705  | 1640 | 209 | 1594 | 1880 | 952 | 424 | 240 | 45 | 1168 |
| <b>o,a</b> | 1    | 0    | 0   | 0    | 0    | 0   | 0   | 3   | 0  | 0    |
| <b>o,b</b> | 1    | 11   | 45  | 0    | 0    | 18  | 0   | 0   | 0  | 13   |
| <b>o,c</b> | 0    | 60   | 0   | 341  | 0    | 88  | 0   | 0   | 51 | 34   |
| <b>o,d</b> | 1    | 25   | 0   | 0    | 10   | 86  | 0   | 0   | 0  | 61   |
| <b>o,e</b> | 5    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0    |
| <b>o,f</b> | 1    | 1    | 0   | 0    | 0    | 12  | 92  | 0   | 0  | 32   |
| <b>o,g</b> | 1    | 48   | 0   | 0    | 0    | 1   | 0   | 67  | 7  | 29   |
| <b>o,h</b> | 55   | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 1    |
| <b>o,i</b> | 385  | 0    | 1   | 27   | 0    | 0   | 0   | 0   | 0  | 0    |
| <b>o,j</b> | 1    | 28   | 0   | 0    | 0    | 3   | 0   | 0   | 0  | 0    |
| <b>o,k</b> | 0    | 1    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0    |
| <b>o,l</b> | 137  | 274  | 0   | 11   | 2    | 316 | 1   | 27  | 0  | 226  |
| <b>o,m</b> | 12   | 199  | 79  | 0    | 0    | 698 | 0   | 0   | 1  | 348  |
| <b>o,n</b> | 2076 | 160  | 0   | 78   | 298  | 661 | 66  | 19  | 0  | 217  |
| <b>o,o</b> | 0    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0    |
| <b>o,p</b> | 0    | 2    | 0   | 0    | 0    | 48  | 0   | 0   | 4  | 26   |
| <b>o,q</b> | 0    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0    |
| <b>o,r</b> | 234  | 703  | 17  | 9    | 140  | 395 | 4   | 56  | 0  | 317  |
| <b>o,s</b> | 249  | 251  | 0   | 182  | 0    | 112 | 1   | 0   | 0  | 213  |
| <b>o,t</b> | 13   | 28   | 0   | 0    | 0    | 343 | 0   | 0   | 0  | 62   |
| <b>o,u</b> | 0    | 0    | 0   | 0    | 0    | 0   | 0   | 1   | 0  | 0    |
| <b>o,v</b> | 18   | 281  | 0   | 0    | 0    | 428 | 0   | 0   | 0  | 54   |
| <b>o,w</b> | 0    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0    |
| <b>o,x</b> | 0    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0    |
| <b>o,y</b> | 0    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 0    |
| <b>o,z</b> | 0    | 0    | 0   | 0    | 0    | 0   | 0   | 0   | 0  | 19   |

**Trigrammi – 47/81**

|            | <b>j</b> | <b>k</b> | <b>l</b> | <b>m</b> | <b>n</b> | <b>o</b> | <b>p</b> | <b>q</b> | <b>r</b> | <b>s</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>o,_</b> | 1        | 0        | 827      | 889      | 707      | 199      | 1211     | 326      | 307      | 1418     |
| <b>o,a</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>o,b</b> | 0        | 0        | 3        | 0        | 0        | 0        | 0        | 0        | 2        | 0        |
| <b>o,c</b> | 0        | 0        | 1        | 0        | 0        | 130      | 0        | 0        | 5        | 0        |
| <b>o,d</b> | 0        | 0        | 0        | 0        | 0        | 92       | 0        | 0        | 1        | 0        |
| <b>o,e</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 2        |
| <b>o,f</b> | 0        | 0        | 0        | 0        | 0        | 38       | 0        | 0        | 0        | 0        |
| <b>o,g</b> | 0        | 0        | 227      | 0        | 219      | 32       | 0        | 0        | 8        | 0        |
| <b>o,h</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>o,i</b> | 0        | 0        | 1        | 0        | 0        | 0        | 0        | 0        | 1        | 2        |
| <b>o,j</b> | 0        | 0        | 0        | 0        | 0        | 23       | 0        | 0        | 0        | 0        |
| <b>o,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>o,l</b> | 0        | 0        | 134      | 10       | 0        | 317      | 50       | 0        | 0        | 29       |
| <b>o,m</b> | 0        | 0        | 0        | 74       | 0        | 121      | 187      | 0        | 0        | 0        |
| <b>o,n</b> | 0        | 0        | 0        | 0        | 108      | 326      | 0        | 0        | 0        | 134      |
| <b>o,o</b> | 0        | 0        | 12       | 0        | 0        | 0        | 1        | 0        | 0        | 0        |
| <b>o,p</b> | 0        | 0        | 0        | 0        | 0        | 157      | 124      | 0        | 134      | 0        |
| <b>o,q</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>o,r</b> | 0        | 1        | 2        | 127      | 307      | 133      | 37       | 2        | 172      | 260      |
| <b>o,s</b> | 0        | 0        | 0        | 0        | 0        | 119      | 64       | 0        | 0        | 380      |
| <b>o,t</b> | 0        | 0        | 0        | 0        | 0        | 24       | 0        | 0        | 30       | 1        |
| <b>o,u</b> | 0        | 0        | 13       | 0        | 0        | 0        | 15       | 0        | 2        | 1        |
| <b>o,v</b> | 0        | 0        | 0        | 0        | 0        | 59       | 0        | 0        | 20       | 0        |
| <b>o,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>o,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>o,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>o,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |

**Trigrammi – 48/81**

|            | <b>t</b> | <b>u</b> | <b>v</b> | <b>w</b> | <b>x</b> | <b>y</b> | <b>z</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|
| <b>o,_</b> | 362      | 329      | 314      | 0        | 1        | 0        | 28       |
| <b>o,a</b> | 0        | 0        | 2        | 0        | 0        | 0        | 0        |
| <b>o,b</b> | 0        | 3        | 0        | 0        | 0        | 0        | 0        |
| <b>o,c</b> | 1        | 19       | 0        | 0        | 0        | 0        | 0        |
| <b>o,d</b> | 0        | 7        | 0        | 0        | 0        | 0        | 0        |
| <b>o,e</b> | 3        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>o,f</b> | 0        | 1        | 0        | 0        | 0        | 0        | 0        |
| <b>o,g</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>o,h</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>o,i</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>o,j</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>o,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>o,l</b> | 385      | 118      | 15       | 0        | 0        | 0        | 1        |
| <b>o,m</b> | 0        | 31       | 0        | 0        | 0        | 0        | 0        |
| <b>o,n</b> | 382      | 5        | 47       | 0        | 0        | 0        | 7        |
| <b>o,o</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>o,p</b> | 0        | 9        | 0        | 0        | 0        | 0        | 0        |
| <b>o,q</b> | 0        | 7        | 0        | 0        | 0        | 0        | 0        |
| <b>o,r</b> | 456      | 5        | 3        | 0        | 0        | 0        | 64       |
| <b>o,s</b> | 442      | 1        | 0        | 0        | 0        | 0        | 0        |
| <b>o,t</b> | 243      | 70       | 0        | 0        | 0        | 0        | 0        |
| <b>o,u</b> | 2        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>o,v</b> | 0        | 41       | 55       | 0        | 0        | 0        | 0        |
| <b>o,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>o,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>o,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>o,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 31       |

**Trigrammi – 49/81**

|            | _   | a   | b | c   | d  | e   | f | g   | h | i   |
|------------|-----|-----|---|-----|----|-----|---|-----|---|-----|
| <b>p,_</b> | 0   | 1   | 0 | 1   | 1  | 1   | 0 | 0   | 0 | 0   |
| <b>p,a</b> | 45  | 0   | 0 | 36  | 72 | 27  | 0 | 107 | 0 | 10  |
| <b>p,b</b> | 0   | 0   | 0 | 0   | 0  | 0   | 0 | 0   | 0 | 0   |
| <b>p,c</b> | 0   | 0   | 0 | 0   | 0  | 0   | 0 | 0   | 0 | 0   |
| <b>p,d</b> | 0   | 0   | 0 | 0   | 0  | 0   | 0 | 0   | 0 | 0   |
| <b>p,e</b> | 35  | 0   | 4 | 54  | 27 | 0   | 1 | 19  | 0 | 2   |
| <b>p,f</b> | 0   | 0   | 0 | 0   | 0  | 0   | 3 | 0   | 0 | 0   |
| <b>p,g</b> | 0   | 0   | 0 | 0   | 0  | 0   | 0 | 0   | 0 | 0   |
| <b>p,h</b> | 0   | 0   | 0 | 0   | 0  | 0   | 0 | 0   | 0 | 3   |
| <b>p,i</b> | 516 | 387 | 0 | 80  | 30 | 161 | 0 | 17  | 0 | 1   |
| <b>p,j</b> | 0   | 0   | 0 | 0   | 0  | 0   | 0 | 0   | 0 | 0   |
| <b>p,k</b> | 0   | 0   | 0 | 0   | 0  | 0   | 0 | 0   | 0 | 0   |
| <b>p,l</b> | 0   | 17  | 0 | 0   | 0  | 13  | 0 | 0   | 0 | 25  |
| <b>p,m</b> | 0   | 0   | 0 | 0   | 0  | 0   | 0 | 0   | 0 | 0   |
| <b>p,n</b> | 0   | 0   | 0 | 0   | 0  | 0   | 0 | 0   | 0 | 0   |
| <b>p,o</b> | 439 | 0   | 0 | 154 | 15 | 5   | 0 | 15  | 0 | 211 |
| <b>p,p</b> | 5   | 100 | 0 | 0   | 0  | 107 | 0 | 0   | 0 | 50  |
| <b>p,q</b> | 0   | 0   | 0 | 0   | 0  | 0   | 0 | 0   | 0 | 0   |
| <b>p,r</b> | 8   | 40  | 0 | 0   | 0  | 589 | 0 | 0   | 0 | 358 |
| <b>p,s</b> | 1   | 0   | 0 | 0   | 0  | 0   | 0 | 0   | 0 | 5   |
| <b>p,t</b> | 1   | 0   | 0 | 0   | 0  | 0   | 0 | 0   | 0 | 0   |
| <b>p,u</b> | 38  | 0   | 8 | 0   | 2  | 9   | 0 | 20  | 1 | 0   |
| <b>p,v</b> | 0   | 1   | 0 | 0   | 0  | 0   | 0 | 0   | 0 | 0   |
| <b>p,w</b> | 0   | 0   | 0 | 0   | 0  | 0   | 0 | 0   | 0 | 0   |
| <b>p,x</b> | 0   | 0   | 0 | 0   | 0  | 0   | 0 | 0   | 0 | 0   |
| <b>p,y</b> | 0   | 0   | 0 | 0   | 0  | 0   | 0 | 0   | 0 | 0   |
| <b>p,z</b> | 0   | 0   | 0 | 0   | 0  | 0   | 0 | 0   | 0 | 0   |

**Trigrammi – 50/81**

|            | <b>j</b> | <b>k</b> | <b>l</b> | <b>m</b> | <b>n</b> | <b>o</b> | <b>p</b> | <b>q</b> | <b>r</b> | <b>s</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>p,_</b> | 0        | 0        | 1        | 1        | 0        | 0        | 0        | 0        | 0        | 1        |
| <b>p,a</b> | 20       | 0        | 158      | 1        | 70       | 11       | 127      | 0        | 606      | 189      |
| <b>p,b</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>p,c</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>p,d</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>p,e</b> | 0        | 0        | 76       | 0        | 300      | 0        | 36       | 0        | 1826     | 132      |
| <b>p,f</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>p,g</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>p,h</b> | 0        | 0        | 0        | 0        | 0        | 1        | 0        | 0        | 0        | 0        |
| <b>p,i</b> | 0        | 0        | 7        | 3        | 45       | 70       | 2        | 0        | 94       | 21       |
| <b>p,j</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>p,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>p,l</b> | 0        | 0        | 0        | 0        | 0        | 4        | 2        | 0        | 0        | 0        |
| <b>p,m</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>p,n</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>p,o</b> | 0        | 0        | 68       | 91       | 111      | 3        | 6        | 0        | 285      | 318      |
| <b>p,p</b> | 0        | 0        | 10       | 0        | 0        | 127      | 0        | 0        | 87       | 0        |
| <b>p,q</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>p,r</b> | 0        | 0        | 0        | 0        | 0        | 452      | 0        | 0        | 0        | 2        |
| <b>p,s</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>p,t</b> | 0        | 0        | 0        | 0        | 0        | 1        | 0        | 0        | 0        | 0        |
| <b>p,u</b> | 0        | 0        | 11       | 4        | 124      | 3        | 0        | 0        | 186      | 9        |
| <b>p,v</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>p,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>p,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>p,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>p,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |

**Trigrammi – 51/81**

|            | t   | u  | v   | w | x | y | z  |
|------------|-----|----|-----|---|---|---|----|
| <b>p,_</b> | 0   | 0  | 2   | 0 | 0 | 0 | 0  |
| <b>p,a</b> | 52  | 38 | 30  | 0 | 0 | 0 | 44 |
| <b>p,b</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>p,c</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>p,d</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>p,e</b> | 219 | 0  | 52  | 0 | 0 | 0 | 37 |
| <b>p,f</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>p,g</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>p,h</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>p,i</b> | 105 | 24 | 3   | 0 | 0 | 0 | 8  |
| <b>p,j</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>p,k</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>p,l</b> | 0   | 4  | 0   | 0 | 0 | 0 | 0  |
| <b>p,m</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>p,n</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>p,o</b> | 353 | 3  | 117 | 0 | 0 | 0 | 0  |
| <b>p,p</b> | 0   | 83 | 0   | 0 | 0 | 0 | 0  |
| <b>p,q</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>p,r</b> | 0   | 6  | 0   | 0 | 0 | 0 | 0  |
| <b>p,s</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>p,t</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>p,u</b> | 25  | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>p,v</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>p,w</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>p,x</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>p,y</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| <b>p,z</b> | 0   | 0  | 0   | 0 | 0 | 0 | 0  |



**Trigrammi – 52/81**

|     | _ | a   | b | c | d | e    | f | g | h | i   |
|-----|---|-----|---|---|---|------|---|---|---|-----|
| q,_ | 1 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,a | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,b | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,c | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,d | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,e | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,f | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,g | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,h | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,i | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,j | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,k | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,l | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,m | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,n | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,o | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,p | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,q | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,r | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,s | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,t | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,u | 8 | 783 | 0 | 0 | 0 | 1345 | 0 | 0 | 0 | 107 |
| q,v | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,w | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,x | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,y | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |
| q,z | 0 | 0   | 0 | 0 | 0 | 0    | 0 | 0 | 0 | 0   |

**Trigrammi – 53/81**

|     | j | k | l | m | n | o | p | q | r | s |
|-----|---|---|---|---|---|---|---|---|---|---|
| q,_ | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| q,a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,b | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,c | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,d | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,e | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,f | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,g | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,i | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,j | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,k | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,l | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,m | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,n | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,o | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,p | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,q | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,r | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,s | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,t | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,u | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| q,v | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,w | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,x | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,y | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Trigrammi – 54/81**

|     | t | u | v | w | x | y | z |
|-----|---|---|---|---|---|---|---|
| q,_ | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,a | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,b | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,c | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,d | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,e | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,f | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,g | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,h | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,i | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,j | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,k | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,l | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,m | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,n | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,o | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,p | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,q | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,r | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,s | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,t | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,u | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,v | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,w | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,x | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,y | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| q,z | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Trigrammi – 55/81**

|     | _    | a   | b   | c   | d   | e   | f  | g   | h   | i   |
|-----|------|-----|-----|-----|-----|-----|----|-----|-----|-----|
| r,_ | 17   | 164 | 39  | 231 | 148 | 48  | 82 | 53  | 2   | 129 |
| r,a | 1912 | 0   | 58  | 113 | 60  | 12  | 42 | 172 | 0   | 50  |
| r,b | 1    | 62  | 0   | 0   | 0   | 2   | 0  | 0   | 0   | 19  |
| r,c | 5    | 63  | 0   | 0   | 0   | 11  | 0  | 0   | 271 | 94  |
| r,d | 14   | 168 | 0   | 0   | 0   | 43  | 0  | 0   | 0   | 115 |
| r,e | 2625 | 42  | 263 | 137 | 148 | 1   | 13 | 83  | 0   | 191 |
| r,f | 0    | 4   | 0   | 0   | 0   | 2   | 0  | 0   | 0   | 9   |
| r,g | 0    | 10  | 0   | 0   | 0   | 49  | 0  | 0   | 11  | 14  |
| r,h | 0    | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   |
| r,i | 430  | 450 | 54  | 269 | 186 | 73  | 57 | 45  | 0   | 22  |
| r,j | 0    | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   |
| r,k | 1    | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   |
| r,l | 6    | 211 | 0   | 0   | 0   | 58  | 0  | 0   | 0   | 35  |
| r,m | 7    | 128 | 0   | 0   | 0   | 95  | 0  | 0   | 0   | 398 |
| r,n | 4    | 157 | 6   | 0   | 0   | 60  | 0  | 0   | 0   | 99  |
| r,o | 1211 | 0   | 33  | 40  | 27  | 5   | 51 | 12  | 0   | 6   |
| r,p | 0    | 3   | 0   | 0   | 0   | 8   | 0  | 0   | 0   | 2   |
| r,q | 0    | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   |
| r,r | 23   | 126 | 0   | 0   | 0   | 141 | 0  | 0   | 0   | 174 |
| r,s | 13   | 61  | 0   | 0   | 0   | 200 | 0  | 0   | 0   | 239 |
| r,t | 34   | 190 | 0   | 0   | 0   | 264 | 0  | 0   | 0   | 165 |
| r,u | 0    | 0   | 23  | 7   | 28  | 0   | 1  | 12  | 0   | 8   |
| r,v | 4    | 42  | 0   | 0   | 0   | 59  | 0  | 0   | 0   | 51  |
| r,w | 0    | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   |
| r,x | 0    | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   |
| r,y | 0    | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   |
| r,z | 2    | 53  | 0   | 0   | 0   | 3   | 0  | 0   | 0   | 7   |

**Trigrammi – 56/81**

|            | <b>j</b> | <b>k</b> | <b>l</b> | <b>m</b> | <b>n</b> | <b>o</b> | <b>p</b> | <b>q</b> | <b>r</b> | <b>s</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>r,_</b> | 0        | 0        | 362      | 213      | 100      | 24       | 192      | 103      | 62       | 128      |
| <b>r,a</b> | 2        | 0        | 135      | 101      | 392      | 8        | 60       | 0        | 211      | 83       |
| <b>r,b</b> | 0        | 0        | 0        | 0        | 0        | 21       | 0        | 0        | 0        | 0        |
| <b>r,c</b> | 0        | 0        | 0        | 0        | 0        | 5        | 0        | 0        | 0        | 0        |
| <b>r,d</b> | 0        | 0        | 0        | 0        | 0        | 87       | 0        | 0        | 0        | 0        |
| <b>r,e</b> | 0        | 0        | 39       | 115      | 256      | 2        | 22       | 12       | 29       | 503      |
| <b>r,f</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>r,g</b> | 0        | 0        | 61       | 0        | 0        | 32       | 0        | 0        | 0        | 0        |
| <b>r,h</b> | 0        | 0        | 0        | 0        | 0        | 1        | 0        | 0        | 0        | 0        |
| <b>r,i</b> | 0        | 0        | 33       | 406      | 274      | 223      | 104      | 0        | 76       | 302      |
| <b>r,j</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>r,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>r,l</b> | 0        | 0        | 0        | 0        | 0        | 124      | 0        | 0        | 0        | 0        |
| <b>r,m</b> | 0        | 0        | 0        | 0        | 0        | 21       | 0        | 0        | 0        | 1        |
| <b>r,n</b> | 0        | 0        | 0        | 0        | 0        | 164      | 0        | 0        | 0        | 0        |
| <b>r,o</b> | 2        | 0        | 69       | 146      | 176      | 0        | 200      | 0        | 20       | 148      |
| <b>r,p</b> | 0        | 0        | 8        | 0        | 0        | 25       | 0        | 0        | 19       | 1        |
| <b>r,q</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>r,r</b> | 0        | 0        | 0        | 0        | 0        | 39       | 0        | 0        | 0        | 0        |
| <b>r,s</b> | 0        | 0        | 0        | 0        | 0        | 105      | 0        | 0        | 0        | 0        |
| <b>r,t</b> | 0        | 0        | 0        | 0        | 0        | 337      | 0        | 0        | 11       | 0        |
| <b>r,u</b> | 0        | 0        | 3        | 12       | 9        | 21       | 25       | 0        | 0        | 5        |
| <b>r,v</b> | 0        | 0        | 0        | 0        | 0        | 25       | 0        | 0        | 0        | 0        |
| <b>r,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>r,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>r,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>r,z</b> | 0        | 0        | 0        | 0        | 0        | 25       | 0        | 0        | 0        | 0        |

**Trigrammi – 57/81**

|     | t   | u  | v   | w | x | y | z   |
|-----|-----|----|-----|---|---|---|-----|
| r,_ | 110 | 71 | 83  | 0 | 0 | 0 | 4   |
| r,a | 391 | 1  | 177 | 0 | 0 | 0 | 165 |
| r,b | 0   | 6  | 0   | 0 | 0 | 0 | 0   |
| r,c | 0   | 0  | 0   | 0 | 0 | 0 | 0   |
| r,d | 0   | 24 | 0   | 0 | 0 | 0 | 0   |
| r,e | 147 | 0  | 113 | 0 | 0 | 0 | 55  |
| r,f | 0   | 0  | 0   | 0 | 0 | 0 | 0   |
| r,g | 0   | 1  | 0   | 0 | 0 | 0 | 0   |
| r,h | 0   | 0  | 0   | 0 | 0 | 0 | 0   |
| r,i | 344 | 39 | 167 | 0 | 0 | 0 | 24  |
| r,j | 0   | 0  | 0   | 0 | 0 | 0 | 0   |
| r,k | 0   | 0  | 0   | 0 | 0 | 0 | 0   |
| r,l | 0   | 0  | 0   | 0 | 0 | 0 | 0   |
| r,m | 0   | 3  | 0   | 0 | 0 | 0 | 0   |
| r,n | 0   | 4  | 0   | 0 | 0 | 0 | 0   |
| r,o | 43  | 24 | 295 | 0 | 0 | 0 | 7   |
| r,p | 0   | 0  | 0   | 0 | 0 | 0 | 0   |
| r,q | 0   | 3  | 0   | 0 | 0 | 0 | 0   |
| r,r | 0   | 14 | 0   | 0 | 0 | 0 | 0   |
| r,s | 4   | 5  | 1   | 0 | 0 | 0 | 0   |
| r,t | 0   | 59 | 0   | 0 | 0 | 0 | 0   |
| r,u | 34  | 0  | 2   | 0 | 0 | 0 | 12  |
| r,v | 0   | 0  | 0   | 0 | 0 | 0 | 0   |
| r,w | 0   | 0  | 0   | 0 | 0 | 0 | 0   |
| r,x | 0   | 0  | 0   | 0 | 0 | 0 | 0   |
| r,y | 0   | 0  | 0   | 0 | 0 | 0 | 0   |
| r,z | 0   | 0  | 0   | 0 | 0 | 0 | 0   |

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|     | _    | a   | b   | c  | d  | e   | f  | g   | h   | i   |
|-----|------|-----|-----|----|----|-----|----|-----|-----|-----|
| s,_ | 51   | 63  | 15  | 64 | 48 | 46  | 22 | 13  | 3   | 39  |
| s,a | 681  | 0   | 14  | 34 | 1  | 1   | 12 | 20  | 0   | 61  |
| s,b | 0    | 39  | 0   | 0  | 0  | 2   | 0  | 0   | 0   | 3   |
| s,c | 6    | 261 | 0   | 0  | 0  | 178 | 0  | 0   | 112 | 395 |
| s,d | 0    | 1   | 0   | 0  | 0  | 14  | 0  | 0   | 0   | 0   |
| s,e | 1410 | 4   | 2   | 65 | 57 | 1   | 0  | 192 | 0   | 27  |
| s,f | 0    | 21  | 0   | 0  | 0  | 0   | 0  | 0   | 0   | 20  |
| s,g | 0    | 4   | 0   | 0  | 0  | 0   | 0  | 0   | 2   | 0   |
| s,h | 0    | 0   | 0   | 0  | 0  | 0   | 0  | 0   | 0   | 0   |
| s,i | 1497 | 115 | 49  | 52 | 53 | 70  | 5  | 401 | 0   | 0   |
| s,j | 0    | 0   | 0   | 0  | 0  | 0   | 0  | 0   | 0   | 0   |
| s,k | 0    | 0   | 0   | 0  | 0  | 0   | 0  | 0   | 0   | 0   |
| s,l | 0    | 3   | 0   | 0  | 0  | 0   | 0  | 0   | 0   | 0   |
| s,m | 0    | 32  | 0   | 0  | 0  | 15  | 0  | 0   | 0   | 5   |
| s,n | 1    | 0   | 0   | 0  | 0  | 2   | 0  | 0   | 0   | 0   |
| s,o | 896  | 2   | 5   | 20 | 15 | 0   | 90 | 113 | 0   | 0   |
| s,p | 0    | 108 | 0   | 0  | 0  | 341 | 0  | 0   | 0   | 176 |
| s,q | 0    | 0   | 0   | 0  | 0  | 0   | 0  | 0   | 0   | 0   |
| s,r | 0    | 1   | 0   | 0  | 0  | 0   | 0  | 0   | 0   | 0   |
| s,s | 25   | 275 | 0   | 0  | 0  | 714 | 0  | 0   | 0   | 634 |
| s,t | 28   | 818 | 0   | 0  | 0  | 358 | 0  | 0   | 0   | 362 |
| s,u | 200  | 142 | 111 | 4  | 12 | 41  | 0  | 11  | 0   | 21  |
| s,v | 0    | 4   | 0   | 0  | 0  | 19  | 0  | 0   | 0   | 5   |
| s,w | 0    | 0   | 0   | 0  | 0  | 0   | 0  | 0   | 0   | 0   |
| s,x | 0    | 0   | 0   | 0  | 0  | 0   | 0  | 0   | 0   | 0   |
| s,y | 0    | 0   | 0   | 0  | 0  | 0   | 0  | 0   | 0   | 0   |
| s,z | 0    | 0   | 0   | 0  | 0  | 0   | 0  | 0   | 0   | 0   |

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|            | <b>j</b> | <b>k</b> | <b>l</b> | <b>m</b> | <b>n</b> | <b>o</b> | <b>p</b> | <b>q</b> | <b>r</b> | <b>s</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>s,_</b> | 1        | 0        | 29       | 46       | 24       | 7        | 50       | 12       | 13       | 52       |
| <b>s,a</b> | 1        | 0        | 116      | 58       | 126      | 0        | 172      | 0        | 282      | 26       |
| <b>s,b</b> | 0        | 0        | 0        | 0        | 0        | 1        | 0        | 0        | 2        | 0        |
| <b>s,c</b> | 0        | 0        | 63       | 0        | 0        | 293      | 1        | 0        | 78       | 0        |
| <b>s,d</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 1        | 0        |
| <b>s,e</b> | 0        | 0        | 79       | 124      | 494      | 3        | 17       | 2        | 500      | 14       |
| <b>s,f</b> | 0        | 0        | 0        | 0        | 0        | 42       | 0        | 0        | 1        | 0        |
| <b>s,g</b> | 0        | 0        | 0        | 0        | 0        | 9        | 0        | 0        | 29       | 0        |
| <b>s,h</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>s,i</b> | 0        | 0        | 43       | 240      | 102      | 137      | 1        | 0        | 0        | 98       |
| <b>s,j</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>s,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>s,l</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>s,m</b> | 0        | 0        | 0        | 0        | 0        | 11       | 0        | 0        | 0        | 0        |
| <b>s,n</b> | 0        | 0        | 0        | 0        | 0        | 1        | 0        | 0        | 0        | 0        |
| <b>s,o</b> | 3        | 0        | 283      | 32       | 172      | 0        | 39       | 0        | 147      | 78       |
| <b>s,p</b> | 0        | 0        | 7        | 0        | 0        | 156      | 0        | 0        | 33       | 0        |
| <b>s,q</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>s,r</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>s,s</b> | 0        | 0        | 0        | 0        | 0        | 425      | 0        | 0        | 0        | 0        |
| <b>s,t</b> | 0        | 0        | 0        | 0        | 0        | 491      | 0        | 0        | 535      | 2        |
| <b>s,u</b> | 0        | 0        | 150      | 11       | 77       | 188      | 44       | 0        | 22       | 10       |
| <b>s,v</b> | 0        | 0        | 0        | 0        | 0        | 3        | 0        | 0        | 0        | 0        |
| <b>s,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>s,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>s,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>s,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |



**Trigrammi – 60/81**

|     | t  | u   | v  | w | x | y | z  |
|-----|----|-----|----|---|---|---|----|
| s,_ | 14 | 11  | 11 | 0 | 0 | 0 | 1  |
| s,a | 90 | 1   | 50 | 0 | 0 | 0 | 8  |
| s,b | 0  | 12  | 0  | 0 | 0 | 0 | 0  |
| s,c | 0  | 110 | 0  | 0 | 0 | 0 | 0  |
| s,d | 0  | 0   | 0  | 0 | 0 | 0 | 0  |
| s,e | 46 | 0   | 3  | 0 | 0 | 0 | 5  |
| s,f | 0  | 13  | 0  | 0 | 0 | 0 | 0  |
| s,g | 0  | 29  | 0  | 0 | 0 | 0 | 0  |
| s,h | 0  | 0   | 0  | 0 | 0 | 0 | 0  |
| s,i | 76 | 0   | 8  | 0 | 0 | 0 | 12 |
| s,j | 0  | 0   | 0  | 0 | 0 | 0 | 0  |
| s,k | 0  | 0   | 0  | 0 | 0 | 0 | 0  |
| s,l | 0  | 0   | 0  | 0 | 0 | 0 | 0  |
| s,m | 0  | 1   | 0  | 0 | 0 | 0 | 0  |
| s,n | 0  | 0   | 0  | 0 | 0 | 0 | 0  |
| s,o | 84 | 0   | 5  | 0 | 0 | 0 | 0  |
| s,p | 0  | 12  | 0  | 0 | 0 | 0 | 0  |
| s,q | 0  | 10  | 0  | 0 | 0 | 0 | 0  |
| s,r | 0  | 0   | 0  | 0 | 0 | 0 | 0  |
| s,s | 1  | 106 | 0  | 0 | 0 | 0 | 0  |
| s,t | 1  | 65  | 0  | 0 | 0 | 0 | 0  |
| s,u | 9  | 0   | 0  | 0 | 0 | 0 | 0  |
| s,v | 0  | 0   | 0  | 0 | 0 | 0 | 0  |
| s,w | 0  | 0   | 0  | 0 | 0 | 0 | 0  |
| s,x | 0  | 0   | 0  | 0 | 0 | 0 | 0  |
| s,y | 0  | 0   | 0  | 0 | 0 | 0 | 0  |
| s,z | 0  | 0   | 0  | 0 | 0 | 0 | 0  |

**Trigrammi – 61/81**

|     | _    | a   | b  | c   | d  | e   | f  | g  | h | i   |
|-----|------|-----|----|-----|----|-----|----|----|---|-----|
| t,_ | 19   | 51  | 1  | 42  | 72 | 23  | 9  | 4  | 2 | 31  |
| t,a | 1587 | 0   | 29 | 57  | 20 | 0   | 10 | 16 | 0 | 73  |
| t,b | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| t,c | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 1   |
| t,d | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| t,e | 1598 | 4   | 0  | 64  | 9  | 0   | 4  | 33 | 0 | 32  |
| t,f | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| t,g | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| t,h | 2    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| t,i | 954  | 111 | 6  | 154 | 16 | 58  | 11 | 17 | 0 | 32  |
| t,j | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| t,k | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| t,l | 0    | 1   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| t,m | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| t,n | 0    | 0   | 0  | 0   | 0  | 1   | 0  | 0  | 0 | 1   |
| t,o | 4406 | 2   | 1  | 36  | 6  | 0   | 2  | 44 | 0 | 1   |
| t,p | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| t,q | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| t,r | 18   | 851 | 0  | 0   | 0  | 287 | 0  | 0  | 0 | 279 |
| t,s | 0    | 0   | 0  | 0   | 1  | 0   | 0  | 0  | 0 | 0   |
| t,t | 57   | 472 | 0  | 0   | 0  | 391 | 0  | 0  | 0 | 437 |
| t,u | 74   | 43  | 1  | 5   | 41 | 5   | 4  | 1  | 0 | 17  |
| t,v | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| t,w | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| t,x | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| t,y | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| t,z | 6    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |

**Trigrammi – 62/81**

|     | j | k | l  | m   | n   | o    | p  | q | r   | s   |
|-----|---|---|----|-----|-----|------|----|---|-----|-----|
| t,_ | 0 | 0 | 26 | 34  | 16  | 5    | 44 | 9 | 8   | 30  |
| t,a | 2 | 0 | 89 | 100 | 557 | 0    | 8  | 1 | 332 | 71  |
| t,b | 0 | 0 | 0  | 0   | 0   | 0    | 0  | 0 | 0   | 0   |
| t,c | 0 | 0 | 0  | 0   | 0   | 0    | 0  | 0 | 0   | 0   |
| t,d | 0 | 0 | 0  | 0   | 0   | 0    | 0  | 0 | 0   | 0   |
| t,e | 0 | 0 | 97 | 151 | 394 | 4    | 2  | 0 | 456 | 279 |
| t,f | 0 | 0 | 0  | 0   | 0   | 0    | 0  | 0 | 0   | 0   |
| t,g | 0 | 0 | 0  | 0   | 0   | 0    | 0  | 0 | 0   | 0   |
| t,h | 0 | 0 | 0  | 0   | 0   | 5    | 0  | 0 | 0   | 0   |
| t,i | 0 | 0 | 27 | 143 | 165 | 8    | 15 | 0 | 111 | 67  |
| t,j | 0 | 0 | 0  | 0   | 0   | 0    | 0  | 0 | 0   | 0   |
| t,k | 0 | 0 | 0  | 0   | 0   | 0    | 0  | 0 | 0   | 0   |
| t,l | 0 | 0 | 0  | 0   | 0   | 0    | 0  | 0 | 0   | 0   |
| t,m | 0 | 0 | 0  | 0   | 0   | 0    | 0  | 0 | 0   | 0   |
| t,n | 0 | 0 | 0  | 0   | 0   | 0    | 0  | 0 | 0   | 0   |
| t,o | 4 | 0 | 59 | 26  | 73  | 0    | 15 | 0 | 337 | 43  |
| t,p | 0 | 0 | 0  | 0   | 0   | 0    | 0  | 0 | 0   | 0   |
| t,q | 0 | 0 | 0  | 0   | 0   | 0    | 0  | 0 | 0   | 0   |
| t,r | 0 | 0 | 0  | 0   | 0   | 562  | 0  | 0 | 0   | 0   |
| t,s | 0 | 0 | 0  | 0   | 0   | 0    | 0  | 0 | 0   | 2   |
| t,t | 0 | 0 | 0  | 0   | 0   | 1091 | 0  | 0 | 67  | 0   |
| t,u | 0 | 0 | 3  | 10  | 55  | 26   | 27 | 0 | 170 | 1   |
| t,v | 0 | 0 | 0  | 0   | 0   | 0    | 0  | 0 | 0   | 0   |
| t,w | 0 | 0 | 0  | 0   | 0   | 0    | 0  | 0 | 0   | 0   |
| t,x | 0 | 0 | 0  | 0   | 0   | 0    | 0  | 0 | 0   | 0   |
| t,y | 0 | 0 | 0  | 0   | 0   | 0    | 0  | 0 | 0   | 0   |
| t,z | 0 | 0 | 3  | 0   | 0   | 0    | 0  | 0 | 0   | 0   |

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|     | t   | u  | v   | w | x | y | z  |
|-----|-----|----|-----|---|---|---|----|
| t,_ | 11  | 8  | 7   | 0 | 0 | 0 | 0  |
| t,a | 346 | 2  | 240 | 0 | 0 | 0 | 54 |
| t,b | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| t,c | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| t,d | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| t,e | 20  | 0  | 178 | 0 | 0 | 0 | 25 |
| t,f | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| t,g | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| t,h | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| t,i | 108 | 0  | 85  | 0 | 0 | 0 | 66 |
| t,j | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| t,k | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| t,l | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| t,m | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| t,n | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| t,o | 4   | 0  | 2   | 0 | 0 | 0 | 2  |
| t,p | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| t,q | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| t,r | 0   | 31 | 1   | 0 | 0 | 0 | 0  |
| t,s | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| t,t | 0   | 43 | 0   | 0 | 0 | 0 | 0  |
| t,u | 481 | 0  | 0   | 0 | 0 | 0 | 4  |
| t,v | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| t,w | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| t,x | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| t,y | 0   | 0  | 0   | 0 | 0 | 0 | 0  |
| t,z | 0   | 0  | 0   | 0 | 0 | 0 | 0  |

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|            | _    | a   | b  | c   | d  | e   | f  | g  | h | i   |
|------------|------|-----|----|-----|----|-----|----|----|---|-----|
| <b>u,_</b> | 5    | 11  | 5  | 29  | 16 | 17  | 9  | 6  | 6 | 17  |
| <b>u,a</b> | 286  | 0   | 0  | 1   | 25 | 0   | 0  | 1  | 0 | 0   |
| <b>u,b</b> | 0    | 23  | 40 | 0   | 0  | 4   | 0  | 0  | 0 | 119 |
| <b>u,c</b> | 0    | 9   | 0  | 65  | 0  | 41  | 0  | 0  | 2 | 13  |
| <b>u,d</b> | 1    | 10  | 0  | 0   | 1  | 51  | 0  | 0  | 0 | 76  |
| <b>u,e</b> | 383  | 0   | 0  | 5   | 3  | 0   | 0  | 26 | 0 | 48  |
| <b>u,f</b> | 0    | 0   | 0  | 0   | 0  | 1   | 35 | 0  | 0 | 1   |
| <b>u,g</b> | 1    | 9   | 0  | 0   | 0  | 2   | 0  | 34 | 2 | 21  |
| <b>u,h</b> | 3    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>u,i</b> | 367  | 2   | 0  | 21  | 10 | 17  | 0  | 7  | 0 | 0   |
| <b>u,j</b> | 0    | 0   | 0  | 0   | 0  | 1   | 0  | 0  | 0 | 0   |
| <b>u,k</b> | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>u,l</b> | 120  | 14  | 0  | 0   | 0  | 31  | 0  | 0  | 0 | 18  |
| <b>u,m</b> | 9    | 45  | 2  | 0   | 0  | 81  | 0  | 0  | 0 | 18  |
| <b>u,n</b> | 1041 | 634 | 0  | 5   | 5  | 27  | 0  | 69 | 0 | 80  |
| <b>u,o</b> | 136  | 0   | 0  | 57  | 0  | 0   | 0  | 24 | 0 | 53  |
| <b>u,p</b> | 0    | 13  | 0  | 0   | 0  | 19  | 0  | 0  | 0 | 36  |
| <b>u,q</b> | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>u,r</b> | 72   | 255 | 19 | 6   | 12 | 135 | 0  | 4  | 0 | 84  |
| <b>u,s</b> | 3    | 63  | 0  | 101 | 0  | 25  | 0  | 0  | 0 | 93  |
| <b>u,t</b> | 2    | 103 | 0  | 0   | 0  | 30  | 0  | 0  | 2 | 44  |
| <b>u,u</b> | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>u,v</b> | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 2   |
| <b>u,w</b> | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>u,x</b> | 2    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>u,y</b> | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 0   |
| <b>u,z</b> | 0    | 0   | 0  | 0   | 0  | 0   | 0  | 0  | 0 | 29  |

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|            | <b>j</b> | <b>k</b> | <b>l</b> | <b>m</b> | <b>n</b> | <b>o</b> | <b>p</b> | <b>q</b> | <b>r</b> | <b>s</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>u,_</b> | 0        | 0        | 117      | 28       | 11       | 7        | 20       | 19       | 8        | 18       |
| <b>u,a</b> | 7        | 0        | 282      | 9        | 194      | 0        | 0        | 0        | 226      | 149      |
| <b>u,b</b> | 0        | 0        | 0        | 0        | 0        | 2        | 0        | 0        | 10       | 0        |
| <b>u,c</b> | 0        | 0        | 0        | 0        | 0        | 4        | 0        | 0        | 2        | 0        |
| <b>u,d</b> | 0        | 0        | 0        | 0        | 0        | 8        | 0        | 0        | 0        | 0        |
| <b>u,e</b> | 0        | 0        | 703      | 3        | 37       | 0        | 0        | 0        | 10       | 411      |
| <b>u,f</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>u,g</b> | 0        | 0        | 4        | 0        | 28       | 2        | 0        | 0        | 0        | 0        |
| <b>u,h</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>u,i</b> | 0        | 0        | 27       | 1        | 19       | 2        | 0        | 0        | 20       | 15       |
| <b>u,j</b> | 0        | 0        | 0        | 0        | 0        | 41       | 0        | 0        | 0        | 0        |
| <b>u,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>u,l</b> | 0        | 0        | 96       | 3        | 0        | 3        | 0        | 0        | 0        | 10       |
| <b>u,m</b> | 0        | 0        | 0        | 5        | 0        | 12       | 0        | 0        | 0        | 0        |
| <b>u,n</b> | 0        | 0        | 0        | 1        | 1        | 215      | 0        | 116      | 0        | 23       |
| <b>u,o</b> | 1        | 0        | 115      | 119      | 61       | 0        | 0        | 0        | 90       | 10       |
| <b>u,p</b> | 0        | 0        | 0        | 0        | 0        | 15       | 42       | 0        | 4        | 0        |
| <b>u,q</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>u,r</b> | 0        | 0        | 9        | 4        | 6        | 61       | 0        | 0        | 17       | 3        |
| <b>u,s</b> | 0        | 0        | 0        | 0        | 0        | 22       | 0        | 0        | 0        | 18       |
| <b>u,t</b> | 0        | 0        | 0        | 0        | 0        | 447      | 0        | 0        | 7        | 0        |
| <b>u,u</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>u,v</b> | 0        | 0        | 0        | 0        | 0        | 9        | 0        | 0        | 0        | 0        |
| <b>u,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>u,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>u,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>u,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |

**Trigrammi – 66/81**

|     | t   | u  | v  | w | x | y | z  |
|-----|-----|----|----|---|---|---|----|
| u,_ | 8   | 23 | 8  | 0 | 0 | 0 | 0  |
| u,a | 39  | 0  | 3  | 0 | 0 | 0 | 6  |
| u,b | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| u,c | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| u,d | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| u,e | 6   | 0  | 0  | 0 | 0 | 0 | 0  |
| u,f | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| u,g | 0   | 5  | 0  | 0 | 0 | 0 | 0  |
| u,h | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| u,i | 37  | 0  | 12 | 0 | 0 | 0 | 4  |
| u,j | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| u,k | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| u,l | 46  | 0  | 1  | 0 | 0 | 0 | 0  |
| u,m | 0   | 9  | 0  | 0 | 0 | 0 | 0  |
| u,n | 139 | 2  | 0  | 0 | 0 | 0 | 42 |
| u,o | 25  | 0  | 86 | 0 | 0 | 0 | 0  |
| u,p | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| u,q | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| u,r | 44  | 0  | 4  | 0 | 0 | 0 | 0  |
| u,s | 76  | 1  | 0  | 0 | 0 | 0 | 0  |
| u,t | 505 | 1  | 0  | 0 | 0 | 0 | 0  |
| u,u | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| u,v | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| u,w | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| u,x | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| u,y | 0   | 0  | 0  | 0 | 0 | 0 | 0  |
| u,z | 0   | 0  | 0  | 0 | 0 | 0 | 4  |

**Trigrammi – 67/81**

|     | _    | a   | b  | c   | d   | e   | f | g  | h | i  |
|-----|------|-----|----|-----|-----|-----|---|----|---|----|
| v,_ | 3    | 6   | 0  | 4   | 1   | 2   | 3 | 0  | 0 | 3  |
| v,a | 1614 | 0   | 0  | 12  | 20  | 0   | 0 | 25 | 0 | 43 |
| v,b | 0    | 0   | 0  | 0   | 0   | 0   | 0 | 0  | 0 | 0  |
| v,c | 0    | 0   | 0  | 0   | 0   | 0   | 0 | 0  | 0 | 0  |
| v,d | 0    | 0   | 0  | 0   | 0   | 0   | 0 | 0  | 0 | 0  |
| v,e | 188  | 1   | 0  | 108 | 306 | 0   | 0 | 11 | 0 | 1  |
| v,f | 0    | 0   | 0  | 0   | 0   | 0   | 0 | 0  | 0 | 0  |
| v,g | 0    | 0   | 0  | 0   | 0   | 0   | 0 | 0  | 0 | 0  |
| v,h | 0    | 0   | 0  | 0   | 0   | 0   | 0 | 0  | 0 | 0  |
| v,i | 121  | 232 | 10 | 26  | 79  | 42  | 0 | 28 | 0 | 4  |
| v,j | 0    | 0   | 0  | 0   | 0   | 0   | 0 | 0  | 0 | 0  |
| v,k | 0    | 0   | 0  | 0   | 0   | 0   | 0 | 0  | 0 | 0  |
| v,l | 0    | 0   | 0  | 0   | 0   | 0   | 0 | 0  | 0 | 0  |
| v,m | 0    | 0   | 0  | 0   | 0   | 0   | 0 | 0  | 0 | 0  |
| v,n | 1    | 0   | 0  | 0   | 0   | 0   | 0 | 0  | 0 | 0  |
| v,o | 899  | 0   | 0  | 53  | 0   | 0   | 0 | 48 | 0 | 16 |
| v,p | 0    | 0   | 0  | 0   | 0   | 0   | 0 | 0  | 0 | 0  |
| v,q | 0    | 0   | 0  | 0   | 0   | 0   | 0 | 0  | 0 | 0  |
| v,r | 19   | 6   | 0  | 0   | 0   | 258 | 0 | 0  | 0 | 0  |
| v,s | 0    | 0   | 0  | 0   | 0   | 0   | 0 | 0  | 0 | 0  |
| v,t | 0    | 0   | 0  | 0   | 0   | 0   | 0 | 0  | 0 | 0  |
| v,u | 0    | 0   | 0  | 0   | 0   | 0   | 0 | 0  | 0 | 0  |
| v,v | 0    | 4   | 0  | 0   | 0   | 107 | 0 | 0  | 0 | 74 |
| v,w | 0    | 0   | 0  | 0   | 0   | 0   | 0 | 0  | 0 | 0  |
| v,x | 0    | 0   | 0  | 0   | 0   | 0   | 0 | 0  | 0 | 0  |
| v,y | 0    | 0   | 0  | 0   | 0   | 0   | 0 | 0  | 0 | 0  |
| v,z | 0    | 0   | 0  | 0   | 0   | 0   | 0 | 0  | 0 | 0  |



**Trigrammi – 68/81**

|            | <b>j</b> | <b>k</b> | <b>l</b> | <b>m</b> | <b>n</b> | <b>o</b> | <b>p</b> | <b>q</b> | <b>r</b> | <b>s</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>v,_</b> | 0        | 0        | 5        | 3        | 0        | 0        | 3        | 0        | 3        | 1        |
| <b>v,a</b> | 0        | 0        | 67       | 43       | 330      | 0        | 3        | 0        | 80       | 27       |
| <b>v,b</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>v,c</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>v,d</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>v,e</b> | 0        | 0        | 38       | 6        | 365      | 0        | 0        | 0        | 715      | 173      |
| <b>v,f</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>v,g</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>v,h</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>v,i</b> | 0        | 0        | 43       | 5        | 81       | 34       | 1        | 0        | 21       | 116      |
| <b>v,j</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>v,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>v,l</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>v,m</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>v,n</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>v,o</b> | 0        | 0        | 591      | 0        | 4        | 0        | 0        | 0        | 52       | 25       |
| <b>v,p</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>v,q</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>v,r</b> | 0        | 0        | 0        | 0        | 0        | 1        | 0        | 0        | 0        | 0        |
| <b>v,s</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>v,t</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>v,u</b> | 0        | 0        | 6        | 0        | 3        | 72       | 0        | 0        | 0        | 0        |
| <b>v,v</b> | 0        | 0        | 0        | 0        | 0        | 7        | 0        | 0        | 0        | 0        |
| <b>v,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>v,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>v,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>v,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |

**Trigrammi – 69/81**

|     | t   | u | v   | w | x | y | z  |
|-----|-----|---|-----|---|---|---|----|
| v,_ | 1   | 0 | 0   | 0 | 0 | 0 | 0  |
| v,a | 90  | 0 | 48  | 0 | 0 | 0 | 6  |
| v,b | 0   | 0 | 0   | 0 | 0 | 0 | 0  |
| v,c | 0   | 0 | 0   | 0 | 0 | 0 | 0  |
| v,d | 0   | 0 | 0   | 0 | 0 | 0 | 0  |
| v,e | 53  | 3 | 585 | 0 | 0 | 0 | 5  |
| v,f | 0   | 0 | 0   | 0 | 0 | 0 | 0  |
| v,g | 0   | 0 | 0   | 0 | 0 | 0 | 0  |
| v,h | 0   | 0 | 0   | 0 | 0 | 0 | 0  |
| v,i | 166 | 0 | 140 | 0 | 0 | 0 | 10 |
| v,j | 0   | 0 | 0   | 0 | 0 | 0 | 0  |
| v,k | 0   | 0 | 0   | 0 | 0 | 0 | 0  |
| v,l | 0   | 0 | 0   | 0 | 0 | 0 | 0  |
| v,m | 0   | 0 | 0   | 0 | 0 | 0 | 0  |
| v,n | 0   | 0 | 0   | 0 | 0 | 0 | 0  |
| v,o | 5   | 0 | 0   | 0 | 0 | 0 | 3  |
| v,p | 0   | 0 | 0   | 0 | 0 | 0 | 0  |
| v,q | 0   | 0 | 0   | 0 | 0 | 0 | 0  |
| v,r | 0   | 1 | 0   | 0 | 0 | 0 | 0  |
| v,s | 1   | 0 | 0   | 0 | 0 | 0 | 0  |
| v,t | 0   | 0 | 0   | 0 | 0 | 0 | 0  |
| v,u | 95  | 0 | 0   | 0 | 0 | 0 | 0  |
| v,v | 0   | 0 | 0   | 0 | 0 | 0 | 0  |
| v,w | 0   | 0 | 0   | 0 | 0 | 0 | 0  |
| v,x | 0   | 0 | 0   | 0 | 0 | 0 | 0  |
| v,y | 0   | 0 | 0   | 0 | 0 | 0 | 0  |
| v,z | 0   | 0 | 0   | 0 | 0 | 0 | 0  |

**Trigrammi – 70/81**

|     | _ | a | b | c | d | e | f | g | h | i |
|-----|---|---|---|---|---|---|---|---|---|---|
| w,_ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,b | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,c | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,d | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,e | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,f | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,g | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,i | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,j | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,k | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,l | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,m | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,n | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,o | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,p | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,q | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,r | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,s | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,t | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,u | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,v | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,w | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,x | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,y | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Trigrammi – 71/81**

|            | <b>j</b> | <b>k</b> | <b>l</b> | <b>m</b> | <b>n</b> | <b>o</b> | <b>p</b> | <b>q</b> | <b>r</b> | <b>s</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>w,_</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,a</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,b</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,c</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,d</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,e</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,f</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,g</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,h</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,i</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,j</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,l</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,m</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,n</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,o</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 1        | 0        |
| <b>w,p</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,q</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,r</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,s</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,t</b> | 0        | 0        | 0        | 0        | 0        | 1        | 0        | 0        | 0        | 0        |
| <b>w,u</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,v</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>w,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |

**Trigrammi – 72/81**

|     | t | u | v | w | x | y | z |
|-----|---|---|---|---|---|---|---|
| w,_ | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| w,a | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,b | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,c | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,d | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,e | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,f | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,g | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,h | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,i | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,j | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,k | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,l | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,m | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,n | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,o | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,p | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,q | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,r | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,s | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,t | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,u | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,v | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,w | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,x | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,y | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| w,z | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Trigrammi – 73/81**

|     | _  | a | b | c | d | e | f | g | h | i |
|-----|----|---|---|---|---|---|---|---|---|---|
| x,_ | 10 | 3 | 1 | 2 | 1 | 1 | 0 | 2 | 0 | 0 |
| x,a | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,b | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,c | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,d | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,e | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,f | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,g | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,h | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,i | 1  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| x,j | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,k | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,l | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,m | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,n | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,o | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,p | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,q | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,r | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,s | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,t | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,u | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,v | 1  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| x,w | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,x | 1  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,y | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| x,z | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Trigrammi – 74/81**

|            | <b>j</b> | <b>k</b> | <b>l</b> | <b>m</b> | <b>n</b> | <b>o</b> | <b>p</b> | <b>q</b> | <b>r</b> | <b>s</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>x,_</b> | 0        | 0        | 2        | 4        | 1        | 1        | 4        | 0        | 0        | 6        |
| <b>x,a</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,b</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,c</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,d</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,e</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,f</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,g</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,h</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,i</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,j</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,l</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,m</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,n</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,o</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,p</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,q</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,r</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,s</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,t</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,u</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,v</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |

**Trigrammi – 75/81**

|            | <b>t</b> | <b>u</b> | <b>v</b> | <b>w</b> | <b>x</b> | <b>y</b> | <b>z</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|
| <b>x,_</b> | 1        | 2        | 1        | 0        | 0        | 0        | 0        |
| <b>x,a</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,b</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,c</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,d</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,e</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,f</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,g</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,h</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,i</b> | 0        | 0        | 1        | 0        | 1        | 0        | 0        |
| <b>x,j</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,l</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,m</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,n</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,o</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,p</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,q</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,r</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,s</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,t</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,u</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,v</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>x,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        |



**Trigrammi – 76/81**

|     | _ | a | b | c | d | e | f | g | h | i |
|-----|---|---|---|---|---|---|---|---|---|---|
| y,_ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,b | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,c | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,d | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,e | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,f | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,g | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,i | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,j | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,k | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,l | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,m | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,n | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,o | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,p | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,q | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,r | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,s | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,t | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,u | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,v | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,w | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,x | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,y | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Trigrammi – 77/81**

|            | <b>j</b> | <b>k</b> | <b>l</b> | <b>m</b> | <b>n</b> | <b>o</b> | <b>p</b> | <b>q</b> | <b>r</b> | <b>s</b> |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>y,_</b> | 0        | 0        | 0        | 1        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,a</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,b</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,c</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,d</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,e</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,f</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,g</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,h</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,i</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,j</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,k</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,l</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,m</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,n</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,o</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 1        | 0        |
| <b>y,p</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,q</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,r</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,s</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,t</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,u</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,v</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,w</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,x</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,y</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| <b>y,z</b> | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |

**Trigrammi – 78/81**

|     | t | u | v | w | x | y | z |
|-----|---|---|---|---|---|---|---|
| y,_ | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,a | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,b | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,c | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,d | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,e | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,f | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,g | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,h | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,i | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,j | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,k | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,l | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,m | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,n | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,o | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,p | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,q | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,r | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,s | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,t | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,u | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,v | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,w | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,x | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,y | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| y,z | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Trigrammi – 79/81**

|            | _   | a   | b | c | d | e  | f | g  | h | i  |
|------------|-----|-----|---|---|---|----|---|----|---|----|
| <b>z,_</b> | 1   | 6   | 0 | 4 | 4 | 6  | 1 | 1  | 0 | 4  |
| <b>z,a</b> | 530 | 0   | 1 | 2 | 0 | 0  | 0 | 0  | 0 | 13 |
| <b>z,b</b> | 0   | 0   | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0  |
| <b>z,c</b> | 0   | 0   | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0  |
| <b>z,d</b> | 0   | 0   | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0  |
| <b>z,e</b> | 61  | 0   | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0  |
| <b>z,f</b> | 0   | 0   | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0  |
| <b>z,g</b> | 0   | 0   | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0  |
| <b>z,h</b> | 0   | 0   | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0  |
| <b>z,i</b> | 132 | 176 | 0 | 2 | 0 | 64 | 1 | 1  | 0 | 9  |
| <b>z,j</b> | 0   | 0   | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0  |
| <b>z,k</b> | 0   | 0   | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0  |
| <b>z,l</b> | 0   | 0   | 0 | 0 | 0 | 3  | 0 | 0  | 0 | 0  |
| <b>z,m</b> | 0   | 0   | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0  |
| <b>z,n</b> | 0   | 0   | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0  |
| <b>z,o</b> | 134 | 0   | 1 | 0 | 1 | 0  | 0 | 12 | 0 | 0  |
| <b>z,p</b> | 0   | 0   | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0  |
| <b>z,q</b> | 0   | 0   | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0  |
| <b>z,r</b> | 0   | 0   | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0  |
| <b>z,s</b> | 0   | 0   | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0  |
| <b>z,t</b> | 0   | 0   | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0  |
| <b>z,u</b> | 0   | 0   | 0 | 1 | 0 | 0  | 1 | 0  | 0 | 0  |
| <b>z,v</b> | 0   | 0   | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0  |
| <b>z,w</b> | 0   | 0   | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0  |
| <b>z,x</b> | 0   | 0   | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0  |
| <b>z,y</b> | 0   | 0   | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0  |
| <b>z,z</b> | 1   | 186 | 0 | 0 | 0 | 36 | 0 | 0  | 0 | 51 |

**Trigrammi – 80/81**

|     | j | k | l  | m | n  | o   | p | q | r  | s |
|-----|---|---|----|---|----|-----|---|---|----|---|
| z,_ | 0 | 0 | 4  | 0 | 2  | 1   | 9 | 0 | 2  | 7 |
| z,a | 0 | 0 | 12 | 9 | 26 | 0   | 0 | 0 | 33 | 1 |
| z,b | 0 | 0 | 0  | 0 | 0  | 0   | 0 | 0 | 0  | 0 |
| z,c | 0 | 0 | 0  | 0 | 0  | 0   | 0 | 0 | 0  | 0 |
| z,d | 0 | 0 | 0  | 0 | 0  | 0   | 0 | 0 | 0  | 0 |
| z,e | 0 | 0 | 5  | 0 | 0  | 0   | 0 | 0 | 5  | 0 |
| z,f | 0 | 0 | 0  | 0 | 0  | 0   | 0 | 0 | 0  | 0 |
| z,g | 0 | 0 | 0  | 0 | 0  | 0   | 0 | 0 | 0  | 0 |
| z,h | 0 | 0 | 0  | 0 | 0  | 0   | 0 | 0 | 0  | 0 |
| z,i | 0 | 0 | 0  | 0 | 32 | 482 | 0 | 0 | 2  | 0 |
| z,j | 0 | 0 | 0  | 0 | 0  | 0   | 0 | 0 | 0  | 0 |
| z,k | 0 | 0 | 0  | 0 | 0  | 0   | 0 | 0 | 0  | 0 |
| z,l | 0 | 0 | 0  | 0 | 0  | 0   | 0 | 0 | 0  | 0 |
| z,m | 0 | 0 | 0  | 0 | 0  | 0   | 0 | 0 | 0  | 0 |
| z,n | 0 | 0 | 0  | 0 | 0  | 0   | 0 | 0 | 0  | 0 |
| z,o | 0 | 0 | 17 | 0 | 22 | 9   | 0 | 0 | 2  | 5 |
| z,p | 0 | 0 | 0  | 0 | 0  | 0   | 0 | 0 | 0  | 0 |
| z,q | 0 | 0 | 0  | 0 | 0  | 0   | 0 | 0 | 0  | 0 |
| z,r | 0 | 0 | 0  | 0 | 0  | 0   | 0 | 0 | 0  | 0 |
| z,s | 0 | 0 | 0  | 0 | 0  | 0   | 0 | 0 | 0  | 0 |
| z,t | 0 | 0 | 0  | 0 | 0  | 0   | 0 | 0 | 0  | 0 |
| z,u | 0 | 0 | 0  | 0 | 0  | 4   | 0 | 0 | 5  | 1 |
| z,v | 0 | 0 | 0  | 0 | 0  | 0   | 0 | 0 | 0  | 0 |
| z,w | 0 | 0 | 0  | 0 | 0  | 0   | 0 | 0 | 0  | 0 |
| z,x | 0 | 0 | 0  | 0 | 0  | 0   | 0 | 0 | 0  | 0 |
| z,y | 0 | 0 | 0  | 0 | 0  | 0   | 0 | 0 | 0  | 0 |
| z,z | 0 | 0 | 0  | 0 | 0  | 118 | 0 | 0 | 0  | 0 |

**Trigrammi – 81/81**

|     | t  | u | v  | w | x | y | z |
|-----|----|---|----|---|---|---|---|
| z,_ | 1  | 2 | 0  | 0 | 0 | 0 | 0 |
| z,a | 37 | 0 | 21 | 0 | 0 | 0 | 1 |
| z,b | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,c | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,d | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,e | 5  | 0 | 3  | 0 | 0 | 0 | 0 |
| z,f | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,g | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,h | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,i | 35 | 0 | 1  | 0 | 0 | 0 | 0 |
| z,j | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,k | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,l | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,m | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,n | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,o | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,p | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,q | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,r | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,s | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,t | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,u | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,v | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,w | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,x | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,y | 0  | 0 | 0  | 0 | 0 | 0 | 0 |
| z,z | 0  | 6 | 0  | 0 | 0 | 0 | 0 |

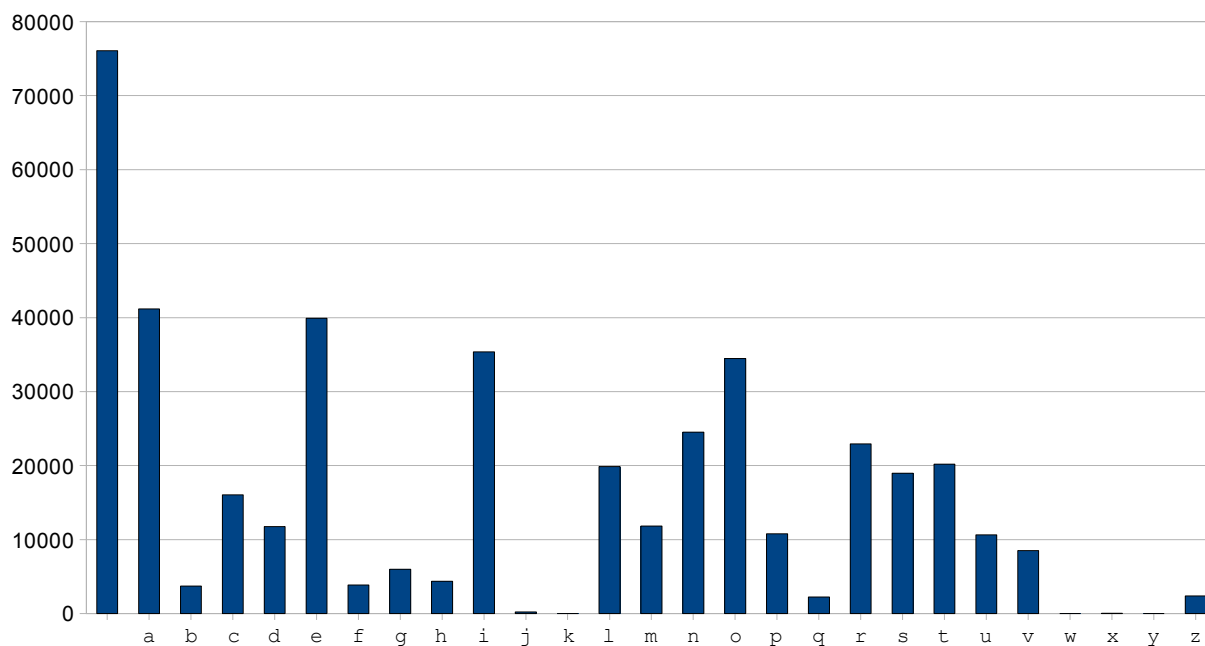
# Osservazioni sui dati

## Unigrammi

Delle 425743 lettere che compongono l'opera, i caratteri che si ripetono con maggior frequenza sono lo spazio (76063 occorrenze, il 17,87 % del totale), la **a** (41155; 9,67%), la **e** (39907; 9,37%) , la **i** (35355; 8,3%), la **o** (34469; 8,1%), la **n** (24507; 5,76%), la **r** (22933; 5,39%).

Sotto la decina di volte, occorrono la **k** (7; 0,002%), la **w** (3; 0,001%) e la **y** (2; 0,001%).

Di seguito un grafico esplicativo (sull'asse delle ordinate le occorrenze, sulle ascisse le lettere dell'alfabeto inglese).

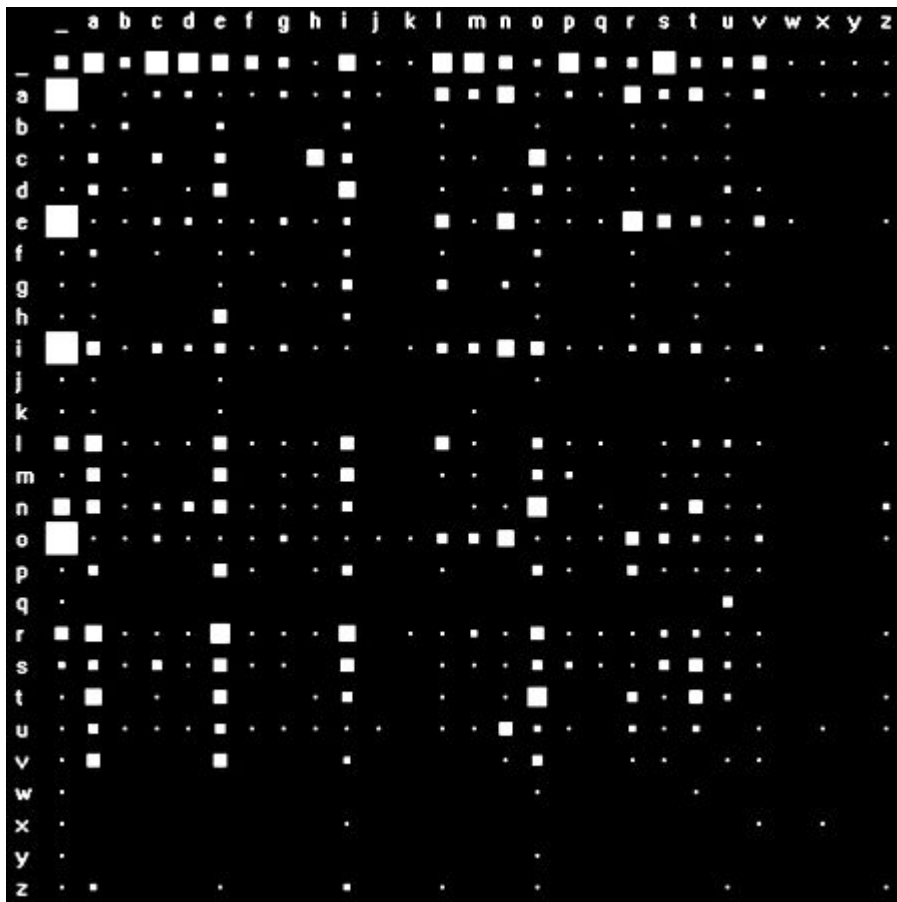


## Digrammi

Dei 425742 digrammi, i più frequenti sono **a\_** (16658; 3,91%), **e\_** (16249; 3,81%), **o\_** (15776; 3,71%), **i\_** (12550; 2,98%), **\_c** (7634; 1,79%), **\_s** (7383; 1,73%).

Si può inoltre notare che molti digrammi non occorrono mai, tre su tutti (presi casualmente): **ak**, **ql**, **tf**.

Di seguito un grafico delle occorrenze, rappresentate dalle aree dei quadrati bianchi (le intestazioni delle righe rappresentano la prima lettera del digramma, quelle delle colonne la seconda).



Dal grafico balza subito all'occhio quanto siano frequenti le parole che finiscono con una vocale (prima colonna, in corrispondenza delle lettere **a**, **e**, **i**, **o**) e di come siano raramente utilizzate le lettere straniere.



### **Trigrammi**

Dei 425741 trigrammi, i più frequenti sono **to\_** (4406; 1,03%), **la\_** (3239; 0,76%), **\_co** (2955; 0,69%), **\_di** (2878; 0,68%), **re\_** (2625; 0,62%), **che** (2548; 0,60%), **he\_** (2356; 0,55%).

Anche in questo caso si può notare che molti trigrammi non occorrono mai, tre su tutti (presi casualmente): **bpq**, **eud**, **tpf**.

## Considerazioni

---

Dai dati raccolti sugli n-grammi presi in considerazione, si possono fare alcune osservazioni generali sulla lingua italiana.

In primo luogo, attraverso lo studio degli unigrammi si riscontra l'importante presenza nel nostro parlato delle vocali, fatta eccezione per la lettera **u** (fanalino di coda, con il 2,5% di occorrenze sul totale).

Le informazioni ricavate dai digrammi sono ancora più interessanti per la comprensione della struttura della lingua: le parole finiscono quasi sempre con una vocale, una caratteristica fondamentale della grammatica italiana.

Si può inoltre notare come la maggior parte delle parole inizino con le lettere **c** ed **s**, o come sia praticamente impossibile che alla lettera **h** segua una consonante (ne *Il fu Mattia Pascal* avviene il contrario in due unici casi, ma all'interno di parole straniere).

Dai trigrammi si osserva infine come la maggior parte delle parole in un discorso finiscano con le lettere **to** o **re**. Da notare come esse costituiscano rispettivamente l'ultima sillaba dei participi passati e dei verbi infiniti, forme verbali di uso molto frequente.

# Appendice

## *Come realizzare il grafico dei digrammi*

---

Il linguaggio di programmazione scelto per la realizzazione del codice è C++, con l'utilizzo delle API Win32.

L'ambiente di sviluppo è *Visual Studio 2005* (standard edition) della *Microsoft*.

Il programma si distingue in due parti, una per il calcolo delle fasce ed una per la realizzazione del grafico.

La prima parte (quella che nel codice verrà chiamata *LoadData()*) si basa su questa idea: dopo aver calcolato il numero di occorrenze di ciascun digramma, gli assegno un valore intero da 0 a 10 che rappresenta una *fascia di appartenenza*. La fascia viene calcolata in base alla frequenza: il digramma che occorre più spesso avrà fascia 10, quello che non appare mai avrà valore 0, gli altri assumeranno valori intermedi.

La seconda parte (quella che nel codice appare nella `case WM_PAINT` della sezione sull'elaborazione e la gestione dei messaggi per la finestra principale) sfrutta i valori calcolati precedentemente per disegnare dei quadrati di dimensione proporzionale alle fasce all'interno di una griglia (non visibile) che permetta l'individuazione delle coordinate del digramma.

Nota: il codice è sviluppato a partire dal template del progetto di un'applicazione Win32, generato automaticamente da *Visual Studio 2005*. Oltre al sorgente *FasceDigrammi.cpp* verranno riportati gli header *FasceDigrammi.h* e *resource.h*.

```

// FasceDigrammi.cpp

#include "FasceDigrammi.h" // include le risorse utilizzate nel codice
#include "stdio.h"
#define MAX_LOADSTRING 100

// Variabili globali
HINSTANCE hInst; // istanza corrente
TCHAR szTitle[MAX_LOADSTRING]; // testo della barra del titolo
TCHAR szWindowClass[MAX_LOADSTRING]; // nome della classe di finestre
// principale

const int rect_no = 27; // dimensione vettore
int d_graFasce[rect_no][rect_no]; // vettore con le fasce dei digrammi
int rect_width = 20; // massima larghezza dei rettangoli
int rect_spacing = 20; // larghezza della griglia del grafico

// Dichiarazioni con prototipo delle funzioni incluse nel codice
ATOM MyRegisterClass(HINSTANCE hInstance);
BOOL InitInstance(HINSTANCE, int);
LRESULT CALLBACK WndProc(HWND, UINT, WPARAM, LPARAM);
LRESULT CALLBACK About(HWND, UINT, WPARAM, LPARAM);
void DrawRect(HDC hdc, RECT rect, COLORREF colorref);
// disegna un rettangolo colorato
void LoadData();
// calcola i valori con cui riempire il vettore delle fasce dei digrammi

// Main
int APIENTRY _tWinMain(HINSTANCE hInstance,
                      HINSTANCE hPrevInstance,
                      LPTSTR lpCmdLine,
                      int nCmdShow)
{
    MSG msg;
    HACCEL hAccelTable;

    // Inizializzare le stringhe globali
    LoadString(hInstance, IDS_APP_TITLE, szTitle, MAX_LOADSTRING);
    LoadString(hInstance, IDC_FASCEDIGRAMMI, szWindowClass, MAX_LOADSTRING);
    MyRegisterClass(hInstance);

    // Caricamento Dati
    LoadData();
    // Eseguire l'inizializzazione dall'applicazione
    if (!InitInstance (hInstance, nCmdShow))
    {
        return FALSE;
    }

    hAccelTable = LoadAccelerators(hInstance, (LPCTSTR)IDC_FASCEDIGRAMMI);

    // Ciclo di messaggi principale
    while (GetMessage(&msg, NULL, 0, 0))
    {
        if (!TranslateAccelerator(msg.hwnd, hAccelTable, &msg))
        {
            TranslateMessage(&msg);
        }
    }
}

```

```

        DispatchMessage (&msg);
    }
}

return (int) msg.wParam;
}

// Registrazione della classe di finestre
ATOM MyRegisterClass(HINSTANCE hInstance)
{
    WNDCLASSEX wcex;

    wcex.cbSize = sizeof(WNDCLASSEX);

    wcex.style = CS_HREDRAW | CS_VREDRAW;
    wcex.lpfnWndProc = (WNDPROC)WndProc;
    wcex.cbClsExtra = 0;
    wcex.cbWndExtra = 0;
    wcex.hInstance = hInstance;
    wcex.hIcon = LoadIcon(hInstance, (LPCTSTR)IDI_FASCEDIGRAMMI);
    wcex.hCursor = LoadCursor(NULL, IDC_ARROW);
    wcex.hbrBackground = (HBRUSH)GetStockObject (BLACK_BRUSH);
    // passo BLACK_BRUSH per avere lo sfondo della finestra nero
    wcex.lpszMenuName = (LPCTSTR)IDI_FASCEDIGRAMMI;
    wcex.lpszClassName = szWindowClass;
    wcex.hIconSm = LoadIcon(wcex.hInstance, (LPCTSTR)IDI_SMALL);

    return RegisterClassEx (&wcex);
}

// Salvataggio della handle di istanza e creazione della finestra principale
BOOL InitInstance(HINSTANCE hInstance, int nCmdShow)
{
    HWND hWnd;

    hInst = hInstance; // Memorizzare l'handle di istanza nella var globale
    hWnd = CreateWindow(szWindowClass, szTitle, WS_OVERLAPPEDWINDOW,
        CW_USEDEFAULT, 0, 590, 610, NULL, NULL, hInstance, NULL);

    if (!hWnd)
    {
        return FALSE;
    }

    ShowWindow(hWnd, nCmdShow);
    UpdateWindow(hWnd);

    return TRUE;
}

// Elaborazione e gestione dei messaggi per la finestra principale
LRESULT CALLBACK WndProc
    (HWND hWnd, UINT message, WPARAM wParam, LPARAM lParam)
{
    int wmId, wmEvent;
    PAINTSTRUCT ps;
    HDC hdc;

```

```

switch (message)
{
case WM_COMMAND:
    wmId = LOWORD(wParam);
    wmEvent = HIWORD(wParam);
    // Analizzare le selezioni di menu
    switch (wmId)
    {
    case IDM_ABOUT:
        DialogBox(hInst, (LPCTSTR)IDD_ABOUTBOX, hWnd, (DLGPROC)About);
        break;
    case IDM_EXIT:
        DestroyWindow(hWnd);
        break;
    default:
        return DefWindowProc(hWnd, message, wParam, lParam);
    }
    break;
case WM_PAINT:
    hdc = BeginPaint(hWnd, &ps);
    RECT rect;

    SetBkColor(hdc, 0x0); // colore di sfondo per il testo
    SetTextColor(hdc, 0xFFFFFF); // colore del testo
    // ciclo per le intestazioni di righe e colonne
    for(int x = 0; x < rect_no; x++)
    {
        char s[2];

        if(x == 0) s[0] = '_'; // memorizza '_' nella posizione 0
        else s[0] = 'a' + x - 1; // ...le lettere dell'alfabeto nelle altre
        s[1] = '\0'; // chiudi stringa
        // imposta le coordinate dell'intestazione delle colonne
        rect.left = (x * rect_spacing) + (rect_spacing / 2) + 21;
        rect.right = 100 + (x * rect_spacing);
        rect.top = 0;
        rect.bottom = 100;
        DrawText(hdc, (LPCWSTR) s, 1, &rect, 0); // scrive le intestazioni
        // imposta le coordinate dell'intestazione delle righe
        rect.top = (x * rect_spacing) + (rect_spacing / 2) + 17;
        rect.bottom = 100 + (x * rect_spacing);
        rect.left = 6;
        rect.right = 100;
        DrawText(hdc, (LPCWSTR) s, 1, &rect, 0); // scrive le intestazioni
    }

    // ciclo per disegnare i rettangoli delle fasce per ogni coordinata
    for(int x = 0; x < rect_no; x++)
        for(int y = 0; y < rect_no; y++)
        {
            rect.left = (x * rect_spacing) + rect_spacing -
                (d_graFasce[y][x] * rect_width / 10) / 2 + 15;
            rect.right = (x * rect_spacing) + rect_spacing +
                (d_graFasce[y][x] * rect_width / 10) / 2 + 15;
            rect.top = (y * rect_spacing) + rect_spacing -
                (d_graFasce[y][x] * rect_width / 10) / 2 + 15;
            rect.bottom = (y * rect_spacing) + rect_spacing +
                (d_graFasce[y][x] * rect_width / 10) / 2 + 15;
        }
}

```

```

        // usa il metodo DrawRect (definito poi) per disegnare
        DrawRect(hdc, rect, 0x00FFFFFF);
    }
    EndPaint(hWnd, &ps);
    break;
case WM_DESTROY:
    PostQuitMessage(0);
    break;
default:
    return DefWindowProc(hWnd, message, wParam, lParam);
}
return 0;
}

// Gestore dei messaggi della finestra Informazioni
LRESULT CALLBACK About(HWND hDlg, UINT message, WPARAM wParam, LPARAM lParam)
{
    switch (message)
    {
        case WM_INITDIALOG:
            return TRUE;

        case WM_COMMAND:
            if (LOWORD(wParam) == IDOK || LOWORD(wParam) == IDCANCEL)
            {
                EndDialog(hDlg, LOWORD(wParam));
                return TRUE;
            }
            break;
    }
    return FALSE;
}

// Metodo che disegna rettangoli di dimensioni posizione e colore specificati
void DrawRect(HDC hdc, RECT rect, COLORREF colorref)
{
    int x, y;
    for(x = rect.left; x < rect.right; x++)
        for(y = rect.top; y < rect.bottom; y++)
            SetPixel(hdc, x, y, colorref);
}

// Metodo che calcola le fasce di appartenenza di ogni digramma
void LoadData()
{
    // dichiarazione variabili
    int i, j;
    int val, max = 0;
    char c, d, e;
    long d_gra[27][27]; // vettori coi contatori dei digrammi
    FILE *Fp_in;        // conterrà il testo da analizzare
    FILE *Fp_out;       // verrà utilizzato per la scansione del testo

    // apertura file
    Fp_in = fopen("Il fu Mattia Pascal.txt", "r");
    Fp_out = fopen("tempDig.txt", "w");
}

```

```

// inizializzazione del vettore d_gra
for(i=0;i<27;i++)
    for(j=0;j<27;j++) d_gra[i][j] = 0;

// creazione e riempimento file tempDig.txt
while(fscanf(Fp_in, "%c", &c) == 1)
{
    // converti gli 'a capo' in spazi nel file temp.txt
    if(c == ' ' || c == 10) fprintf(Fp_out, " ");
    // converti le maiuscole in minuscole
    if(c >= 65 && c <= 90) fprintf(Fp_out, "%c", c+32);
    if(c >= 97 && c <= 122) fprintf(Fp_out, "%c", c);
}

// chiusura dei file aperti
fflush(Fp_in); fclose(Fp_in);
fflush(Fp_out); fclose(Fp_out);

Fp_in = fopen("tempDig.txt", "r");

i = 0;
// riempimento vettore d_gra
while(fscanf(Fp_in, "%c", &c) == 1)
{
    i++;

    // lettura di un secondo carattere per tener conto dei digrammi
    fscanf(Fp_in, "%c", &d);
    if(!feof(Fp_in)) // la condizione feof impedisce all'ultimo carattere
                    // di confrontarsi con sé stesso
    {
        if ((c == ' ') && (d == ' '))
            d_gra[0][0]++;
        else if ((c == ' ') && (d != ' '))
            d_gra[0][d-96]++;
        else if ((c != ' ') && (d == ' '))
            d_gra[c-96][0]++;
        else
            d_gra[c-96][d-96]++;
    }

    fseek(Fp_in, i, 0); //riporta il cursore nella posizione seguente alla c
}

fflush(Fp_in);
fclose(Fp_in);

// scansione valore massimo del vettore d_gra
for(i=0;i<27;i++)
    for(j=0;j<27;j++) if(max < d_gra[i][j]) max = d_gra[i][j];

val = (max - 5000) / 10;
/* NOTA: dal momento che esiste una grande diversità tra valore massimo e
valor medio, otterrei delle fasce sbilanciate in difetto (la quasi
totalità dei digrammi apparterebbe a fasce bassissime). Sottraggo
quindi al massimo un valore numerico arbitrario, in questo caso 5000, per
garantire una maggiore rappresentanza delle fasce medio-basse */

```



```

//assegnamento delle fasce nel vettore d_graFasce
for(i=0;i<27;i++)
    for(j=0;j<27;j++) {
        if (d_gra[i][j] > 9*val) d_graFasce[i][j] = 10;
        else if (d_gra[i][j] > 8*val) d_graFasce[i][j] = 9;
        else if (d_gra[i][j] > 7*val) d_graFasce[i][j] = 8;
        else if (d_gra[i][j] > 6*val) d_graFasce[i][j] = 7;
        else if (d_gra[i][j] > 4*val) d_graFasce[i][j] = 6;
        else if (d_gra[i][j] > 3*val) d_graFasce[i][j] = 5;
        else if (d_gra[i][j] > 2*val) d_graFasce[i][j] = 4;
        else if (d_gra[i][j] > val) d_graFasce[i][j] = 3;
        else if (d_gra[i][j] > val/2) d_graFasce[i][j] = 2;
        else if (d_gra[i][j] > 0) d_graFasce[i][j] = 1;
        else d_graFasce[i][j] = 0;
    }
}

```

---

```

// FasceDigrammi.h

```

```

#pragma once

```

```

#include "resource.h"

```

---

```

// resource.h

```

```

//{{NO_DEPENDENCIES}}

```

```

// Microsoft Visual C++ generated include file.

```

```

// Used by FasceDigrammi.rc

```

```

#define IDS_APP_TITLE 103

#define IDR_MAINFRAME 128
#define IDD_FASCEDIGRAMMI_DIALOG 102
#define IDD_ABOUTBOX 103
#define IDM_ABOUT 104
#define IDM_EXIT 105
#define IDI_FASCEDIGRAMMI 107
#define IDI_SMALL 108
#define IDC_FASCEDIGRAMMI 109
#define IDC_MYICON 2
#ifndef IDC_STATIC
#define IDC_STATIC -1
#endif
// Next default values for new objects
#ifdef APSTUDIO_INVOKED
#ifndef APSTUDIO_READONLY_SYMBOLS

#define _APS_NO_MFC 130
#define _APS_NEXT_RESOURCE_VALUE 129
#define _APS_NEXT_COMMAND_VALUE 32771
#define _APS_NEXT_CONTROL_VALUE 1000
#define _APS_NEXT_SYMED_VALUE 110
#endif
#endif

```

## Fonti

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[http://en.wikipedia.org/wiki/Natural\\_language\\_processing](http://en.wikipedia.org/wiki/Natural_language_processing)

<http://en.wikipedia.org/wiki/N-gram>

[http://it.wikipedia.org/wiki/Analizzatore\\_lessicale](http://it.wikipedia.org/wiki/Analizzatore_lessicale)