**Tema 4**

1. Folosind direct formula, calculați indicii de incidențǎ (s) și (t) pentru șirurile de caractere:
2. s= TGMQMKFEUVPJGUHYWHQVPDSWHTFTVGPMXDHKJSWSOWSIFGJSPCASQFHNKRLZ
3. t= TGKDKVCVPKPWYKRVPUCKTFGCPOHWKPGJOTAGGATEAFFRNCKG

Ce puteți spune despre cele douǎ texte?

1. Se considerǎ șirurile de caractere

= TGKDKVCVPKPWYKRVPUCKTFGCPOHWKPGJOTAGGATEAFFRNCKG

= GYQLYUUXWQULVHQHURWVKPVDWQDUWGWFQFIBBWPQGRFDVHLI

Folosind direct formula, calculați indicii mutuali de incidențǎ (+24) și (+25) unde am notat cu +σ translatarea șirului cu σ poziții la dreapta. Intrepretați valorile gǎsite.

1. Oscar a interceptat urmatorul text cifrat:

**togmg gbymk kcqiv dmlxk kbyif vcuek cuuis vvxqs pwwej koqgg**

**phumt whlsf yovww knhhm rcqfq vvhkw psued ugrsf ctwij khvfa**

**thkef fwptj ggviv cgdra pgwvm osqxg hkdvt whuev kcwyj psgsn**

**gfwsl jsfse ooqhw tofsh aciin gfbif gabgj adwsy topml ecqzw asgvs**

**fwrqs fsfvq rhdrs nmvmk cbhrv kblxk gzi**

El știe cǎ a fost criptat un text în limba englezǎ folosind un cifru Vigenere.

1. Gǎsiti lungimea cheii. (încercați doar valorile k=3, k=4 si k=5).
2. Folosind tabelul de indici mutuali de incidențǎ (+ σ) de mai jos, gǎsiți cheia folositǎ.
3. Gǎsiti primele douǎ cuvinte din textul simplu necifrat.

Atunci cand nu se specificǎ altceva puteți folosi adresele

<https://charactercounttool.com/>

numarare de caractere

<https://www.dcode.fr/index-coincidence>

indice de coincidenta

<https://www.dcode.fr/vigenere-cipher>

decriptare vigenere

<https://www.dcode.fr/letters-extraction>

extragere substringuri

<https://www.dcode.fr/caesar-cipher>

criptare Caesar

In tabel sunt calculați indicii mutuali de incidențǎ (+ σ).

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| --- |
| i j 0 1 2 3 4 5 6 7 8 9 10 11 12 |
| 1 2 .044 .047 .021 .054 .046 .038 .022 .034 .057 .035 .040 .023 .038 |
| 1 3 .038 .031 .027 .037 .045 .036 .034 .032 .039 .039 .047 .038 .050 |
| 1 4 .025 .039 .053 .043 .023 .035 .032 .043 .029 .040 .041 .050 .027 |
| 1 5 .050 .050 .025 .031 .038 .045 .037 .028 .032 .038 .063 .033 .034 |
| 2 3 .035 .037 .039 .031 .031 .035 .047 .048 .034 .031 .031 .067 .053 |
| 2 4 .040 .033 .046 .031 .033 .023 .052 .027 .031 .039 .078 .034 .029 |
| 2 5 .042 .040 .042 .029 .033 .035 .035 .038 .037 .057 .039 .038 .040 |
| 3 4 .032 .033 .035 .049 .053 .027 .030 .022 .047 .036 .040 .036 .052 |
| 3 5 .043 .043 .040 .034 .033 .034 .043 .035 .026 .030 .050 .068 .044 |
| 4 5 .045 .033 .044 .046 .021 .032 .030 .038 .047 .040 .025 .037 .068 |

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| i j 13 14 15 16 17 18 19 20 21 22 23 24 25 |
| 1 2 .040 .063 .033 .025 .032 .055 .038 .030 .032 .045 .035 .030 .044 |
| 1 3 .026 .046 .042 .053 .027 .024 .040 .047 .048 .018 .037 .034 .066 |
| 1 4 .042 .050 .042 .031 .024 .052 .027 .051 .020 .037 .042 .069 .031 |
| 1 5 .030 .048 .039 .030 .034 .038 .042 .035 .036 .043 .055 .030 .035 |
| 2 3 .039 .015 .030 .045 .049 .037 .023 .036 .030 .049 .039 .050 .037 |
| 2 4 .027 .048 .050 .037 .032 .021 .035 .043 .047 .041 .047 .042 .035 |
| 2 5 .033 .035 .039 .033 .037 .047 .037 .028 .034 .066 .054 .032 .022 |
| 3 4 .040 .048 .041 .044 .033 .028 .039 .027 .036 .017 .038 .051 .065 |
| 3 5 .039 .029 .045 .040 .033 .028 .031 .037 .038 .036 .033 .051 .036 |
| 4 5 .049 .033 .029 .043 .028 .033 .020 .040 .040 .041 .039 .039 .059 |