1)

a)

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | - | T | G | C | A | T | T | A | C | G | G | A |
| - | 0 | -1 | -2 | -3 | -4 | -5 | -6 | -7 | -8 | -9 | -10 | -11 |
| A | -1 | -1 | -2 | -3 | 0 | -1 | -2 | -3 | -4 | -5 | -6 | -7 |
| G | -2 | -2 | -2 | 1 | 0 | -1 | -2 | -3 | -4 | -1 | -2 | -3 |
| T | -3 | 1 | 1 | 1 | 0 | 3 | 2 | 1 | 0 | -1 | -2 | -3 |
| T | -4 | 0 | 0 | 0 | 0 | 3 | 6 | 5 | 4 | 3 | 2 | 1 |
| C | -5 | -1 | -1 | 3 | 2 | 2 | 5 | 5 | 8 | 7 | 6 | 5 |
| G | -6 | -2 | 2 | 2 | 2 | 1 | 4 | 4 | 7 | 11 | 10 | 9 |
| A | -7 | -3 | 1 | 1 | 5 | 4 | 3 | 7 | 6 | 10 | 10 | 13 |

b)

|  |  |
| --- | --- |
| X | -1 |
| O | -1 |
| V | 3 |

Boşluk Cezası = -1

Eşleşme Skoru = 3

Eşleşmeme Skoru = -1

c)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| T | G | C | A | T | T | A | C | G | G | A |
| X | V | O | O | V | V | O | V | O | V | V |
| A | G | - | - | T | T | - | C | - | G | A |

d)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| T | G | C | A | T | T | A | C | G | G | A |  |
| X | V | O | O | V | V | O | V | O | V | V |  |
| A | G | - | - | T | T | - | C | - | G | A | Skor |
| -1 | 3 | -1 | -1 | 3 | 3 | -1 | 3 | -1 | 3 | 3 | 13 |

2)

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | - | L | E | K | Q | A | L | L | F | Y | K |  |
| - | 0 | -1 | -2 | -3 | -4 | -5 | -6 | -7 | -8 | -9 | -10 |  |
| F | -1 | 0 | -1 | -2 | -3 | -4 | -5 | -6 | -1 | -2 | -3 |  |
| K | -2 | -1 | 1 | 4 | 3 | 2 | 1 | 0 | -1 | -2 | 3 |  |
| L | -3 | 2 | 1 | 3 | 2 | 2 | 6 | 5 | 4 | 3 | 2 |  |
| A | -4 | 1 | 1 | 2 | 2 | 6 | 5 | 5 | 4 | 3 | 2 |  |
| L | -5 | 0 | 0 | 1 | 1 | 5 | 10 | 9 | 8 | 7 | 6 |  |
| E | -6 | 5 | 5 | 4 | 3 | 4 | 9 | 8 | 7 | 6 | 8 |  |
| V | -7 | 4 | 4 | 3 | 2 | 3 | 8 | 10 | 9 | 8 | 7 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| L | E | K | - | Q | A | L | L | F | Y | K | - |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| F | - | K | L | - | A | L | - | - | - | E | V | SKOR |
| 0 | -1 | 5 | -1 | -1 | 4 | 4 | -1 | -1 | -1 | 1 | -1 | 7 |