**ŠTATISTIKA**

Meno: Petronela Čebrová

Zadanie č.3.:

Štatistický súbor=žiaci

Štatistická jednotka=žiak

Rozsah štatistic. súboru: N=15

Štatistický znak: známka(kvalitatívny)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Štatistické vypracovanie údajov o známkach žiakov A –O:   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | | matematika | 3 | 2 | 1 | 1 | 1 | 2 | 2 | 3 | 4 | 5 | 4 | 3 | 3 | 3 | 2 | | chémia | 3 | 2 | 2 | 3 | 2 | 1 | 2 | 1 | 4 | 4 | 3 | 2 | 4 | 3 | 2 | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  | Známka z biológie - b | |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
| *PREDMET : MATEMATIKA* | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
| **Tabuľka č.1:** | | | | | | | | | | | | | | | |  |  |  |  |  | **Matematika (RP)** |  |  |  |  |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Matematika - AP |  |  |  |  |  | | Známka | 1 | 2 | 3 | 4 | 5 | | Počet žiakov | 3 | 4 | 5 | 2 | 1 | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
| **Tabuľka č.2:**  Matematika - RP   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Známka | | 1 | 2 | 3 | 4 | 5 | | Počet žiakov vyjadrený v % | | 20,00 | 26,66 | 33,33 | 13,33 | 6,66 | |  | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
| |  | | --- | |  | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
| |  | | --- | |  | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
| *PREDMET:CHĖMIA*  **Tabuľka č.1:** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Chémia - AP |  |  |  |  |  | | Známka | 1 | 2 | 3 | 4 | 5 | | Počet žiakov | 2 | 6 | 4 | 3 | 0 | |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Tabuľka č.2:  Chémia – RP   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Známka | 1 | 2 | 3 | 4 | 5 | | Počet žiakov vyjadrených v % | 13,33 | 40,00 | 26,66 | 20,00 | 0,00 | |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  | | | | | | |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |
|  | | | | | | | | | | | | | |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |

*CHARAKTERISTIKA ŠTATISTICKÉHO SÚBORU*

|  |  |
| --- | --- |
| ŽIAK | MATEMATIKA |
| C | 1 |
| D | 1 |
| E | 1 |
| B | 2 |
| F | 2 |
| G | 2 |
| O | 2 |
| A | 3 |
| H | 3 |
| L | 3 |
| M | 3 |
| N | 3 |
| I | 4 |
| K | 4 |
| J | 5 |
| SPOLU | 39 |
| PRIEMER | 2,53 |
| MODUS | 3 |
| MEDIAN | 3 |
| ŽIAK | CHĖMIA | |
| F | 1 | |
| H | 1 | |
| B | 2 | |
| C | 2 | |
| E | 2 | |
| G | 2 | |
| L | 2 | |
| O | 2 | |
| A | 3 | |
| D | 3 | |
| K | 3 | |
| N | 3 | |
| I | 4 | |
| J | 4 | |
| M | 4 | |
| SPOLU | 38 | |
| PRIEMER | 2,53 | |
| MODUS | 2 | |
| MEDIAN | 2 | |

|  |  |  |  |
| --- | --- | --- | --- |
|  | MATEMATIKA | | |
| ŽIAK | x | x-x | ( x - x )2 |
| A | 3 | 0,47 | 0,22 |
| B | 2 | -0,53 | 0,28 |
| C | 1 | -1,53 | 2,35 |
| D | 1 | -1,53 | 2,35 |
| E | 1 | -1,53 | 2,35 |
| F | 2 | -0,53 | 0,28 |
| G | 2 | -0,53 | 0,28 |
| H | 3 | 0,47 | 0,22 |
| I | 4 | 1,47 | 2,15 |
| J | 5 | 2,47 | 6,08 |
| K | 4 | 1,47 | 2,15 |
| L | 3 | 0,47 | 0,22 |
| M | 3 | 0,47 | 0,22 |
| N | 3 | 0,47 | 0,22 |
| O | 2 | -0,53 | 0,28 |
|  |  | SPOLU | 19,67 |
|  |  | ROZPTYL | 1,31 |
|  |  | ODCHÝLKA | 1,14 |
|  |  |  |  |
| |  | | --- | | Priemerná známka z matematiky=2,53±1,14 | | | | | |  | | | | |
|  | CHEMIA | | |
| ŽIAK | y | y-y | ( y- y )2 |
| A | 3 | 0,47 | 0,22 |
| B | 2 | -0,53 | 0,28 |
| C | 2 | -0,53 | 0,28 |
| D | 3 | 0,47 | 0,22 |
| E | 2 | -0,53 | 0,28 |
| F | 1 | -1,53 | 2,35 |
| G | 2 | -0,53 | 0,28 |
| H | 1 | -1,53 | 2,35 |
| I | 4 | 1,47 | 2,15 |
| J | 4 | 1,47 | 2,15 |
| K | 3 | 0,47 | 0,22 |
| L | 2 | -0,53 | 0,28 |
| M | 4 | 1,47 | 2,15 |
| N | 3 | 0,47 | 0,22 |
| O | 2 | -0,53 | 0,28 |
|  |  | SPOLU | 13,73 |
|  |  | ROZPTYL | 0,92 |
|  |  | ODCHÝLKA | 0,96 |
|  |  |  |  |
|  | | | |
| Priemerná známka z chémie=2,53±0,96 | | | |
|
|
|

|  |  |
| --- | --- |
|  | ( x - x )( y - y) |
|  | 0,22 |
|  | 0,28 |
|  | 0,82 |
|  | -0,71 |
|  | 0,82 |
|  | 0,81 |
|  | 0,28 |
|  | -0,72 |
|  | 2,16 |
|  | 3,62 |
|  | 0,69 |
|  | -0,25 |
|  | 0,69 |
|  | 0,22 |
|  | 0,28 |
| SPOLU: | 13,00 |
| KOVARIANCIA: | 0,87 |
| KORELÁCIA: | 0,78 |

Platí, že čím je lepšia známka z matematiky tak, tým je lepšia aj známka z chémie, a naopak.

Závislosť je mierna.

Legenda:

AP – absolútna početnosť

RP – relatívna početnosť