

! !

1.
7

$$7 - 3 + 2 = 6$$

$$7 - 2 = 5$$

2.

	2654
	3850
	2450
	1200
	400
15-49	30

- 1)
- 2)
- 3)
- 4)

$$S = 2654000 + 3850 - 2450 + 1200 - 400 = 2656200$$

2)

$$\bar{S} = \frac{S + S}{2} = \frac{2654000 + 2656200}{2} = 2655100$$

3) :

$$K = \frac{N}{\bar{S}} \cdot 1000 = \frac{3850}{2655100} \cdot 1000 \approx 1,45$$

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$$K = \frac{M}{\bar{S}} \cdot 1000 = \frac{2450}{2655100} \cdot 1000 \approx 0,92$$

:

$$K = \frac{N - M}{\bar{S}} \cdot 1000 = \frac{(3850 - 2450)}{2655100} \cdot 1000 \approx +0,53$$

4)

$$K = \frac{N}{M} = \frac{3850}{2450} \approx 1,57$$

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$$K = \frac{N}{\bar{S} \cdot 0,3} \cdot 1000 = \frac{3850}{2655100 \cdot 0,3} \cdot 1000 = 4,83$$

3.

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 – ,

2009 2010

	2009	2010
, . .	1311,3	1301,1
, . .	12,1	12,8
, . .	22,4	23,5
, . .	15,4	14,6
, . .	15,2	14,3

: 2009 .
 2009 :

$$S = S + N - M + - = 1311,3 + 12,1 - 22,4 + 15,4 - 15,2 = 1301,2$$

$$\bar{S} = \frac{S_1 + S_2}{2} = \frac{1311,3 + 1301,2}{2} = 1306,25$$

$$K_1 = \frac{N_1 - M_1}{\bar{S}} \cdot 1000 = \frac{(12,1 - 22,4)}{1306,25} \cdot 1000 \approx -7,9$$

$$K_2 = \frac{N_2 - M_2}{\bar{S}} \cdot 1000 = \frac{(15,4 - 15,2)}{1306,25} \cdot 1000 \approx +0,2$$

$$K_{2009} = K_1 + K_2 \approx -7,9 + 0,2 = -7,7$$

4. 1 2010 $\therefore S_1 = 943000$

2010 \therefore

: $N = 9380$

: $M = 7040$

: $= 18730$

: $= 13380$

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$$S_2 = S_1 + N - M + \dots = 943000 + 9380 - 7040 + 18730 - 13380 = 950690$$

$$\bar{S} = \frac{S_1 + S_2}{2} = \frac{943000 + 950690}{2} = 946845$$

$$K = \frac{N}{\bar{S}} \cdot 1000 = \frac{9380}{946845} \cdot 1000 \approx 9,91$$

$$K = \frac{M}{S} \cdot 1000 = \frac{7040}{946845} \cdot 1000 \approx 7,44$$

$$K = \frac{N - M}{S} \cdot 1000 = \frac{(9380 - 7040)}{946845} \cdot 1000 \approx +2,47$$

$$K = \frac{-}{S} \cdot 1000 = \frac{(18730 - 13380)}{946845} \cdot 1000 \approx +5,65$$

$$K = K + K \approx 2,47 + 5,65 = +8,12$$

$$K = \frac{+}{S} \cdot 1000 = \frac{(18730 + 13380)}{946845} \cdot 1000 \approx 34$$

$$K = \frac{-}{+} \cdot 100 = \frac{(18730 - 13380)}{(18730 + 13380)} \cdot 100 \approx 16,66\%$$

5.

	1406
	1461
	2,92
	1,38
	52
15-49	, %:
	30,3
	30,7

2000

(.);
 (%);
 (%);
 (.);

$$\bar{S} = \frac{S_1 + S_2}{2} = \frac{1406 + 1461}{2} = 1433,5$$

$$\bar{S} = \frac{S_1 + S_2}{2} = \frac{1406 + 1461}{2} = 1433,5$$

$$K = \frac{N}{\bar{S}} \cdot 1000$$

$$K = \frac{N - M}{\bar{S}} \cdot 1000, \quad M -$$

$$2,92 = \frac{(N - M)}{1433,5} \cdot 1000 \Rightarrow N - M = \frac{2,92 \cdot 1433,5}{1000} \approx 4,186$$

$$K = \frac{N}{M} = 1,38 \Rightarrow N = 1,38M -$$

$$N - M = 4,186:$$

$$1,38M - M = 4,186$$

$$0,38M = 4,186$$

$$M = \frac{4,186}{0,38} = 11,015$$

$$N = 1,38M = 1,38 \cdot 11,015 = 15,201$$

$$K = \frac{15,201}{1433,5} \cdot 1000 \approx 10,6$$

$$K = \frac{M}{\bar{S}} \cdot 1000 = \frac{11,015}{1433,5} \cdot 1000 \approx 7,68$$

$$\Delta = S - S - (N - M) = 1461 - 1406 - 4,186 = +50,814$$

$$K = \frac{\Delta}{S} \cdot 1000 = \frac{50,814}{1433,5} \cdot 1000 \approx 35,4$$

$$K = K + K = 2,92 + 35,4 = 38,4$$

$$K = \frac{N}{S \cdot 0,303 + S \cdot 0,307} \cdot 1000 = \frac{15,201}{1406 \cdot 0,303 + 1461 \cdot 0,307} \cdot 1000 =$$

$$= \frac{15,201}{1406 \cdot 0,303 + 1461 \cdot 0,307} \cdot 1000 = \frac{15,201}{437,273} \cdot 1000 \approx 34,8$$

$$K = \frac{N}{N} \cdot 1000 = \frac{52}{15201} \cdot 1000 \approx 3,4$$

6.

- 1.
- 2.
- 3.
- 4.

	1
	147,6
	65,95
	6,73

$$S = S + S = 65,95 + 6,73 = 72,68$$

$$K = \frac{S}{S} = \frac{72,68}{147,6} \approx 0,4924 \quad 49,24\%$$

$$K = \frac{S}{S} = \frac{65,95}{72,68} \approx 0,9074 \quad 90,74\%$$

4. :

$$K = \frac{S}{S} = \frac{6,73}{72,68} \cdot 100\% \approx 9,26\%$$

: , - 10%,

7.

1. , ;
2. ;
3. ;
4. .

	.
	148,3
	102,1
	84,1
	72,9
	67,1

1) :

$$K_{(T)} = \frac{S}{T} = \frac{67,1}{102,1} \approx 0,6572 \quad 65,72\%$$

$$K_{(S)} = \frac{S}{S} = \frac{67,1}{84,1} \approx 0,7979 \quad 79,79\%$$

2) :

$$\delta = \frac{72,9}{84,1} \approx 0,8668 \quad 86,68\%$$

3) :

$$\delta = \frac{84,1}{102,1} \approx 0,8237 \quad 82,37\%$$

4) :

$$\delta = \frac{102,1}{148,3} \approx 0,6885 \quad 68,85\%$$

8. 16 59 -150 . . , 170 . . 16 , . 76 . .
 16 54 -166 . . 1%
 1 2
 300 . .
 292 . .

— ;
 — ;
 — ;
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 — ;

$n = 170 + 150 + 166 + 76 = 562$. . :

$p = \frac{n}{n} = \frac{150 + 166}{562} = \frac{316}{562} \approx 0,56$:

$K = \frac{n}{n} = \frac{76}{316} = 0,24$:

$K = \frac{n_{0-15}}{n} = \frac{170}{316} = 0,54$:

$K = \frac{(n + n_{0-15})}{n} = \frac{(76 + 170)}{316} = 0,78$:

$n = 316 - 316 \cdot 0,01 = 316 - 3,16 = 312,84$. .

$n + n = 300 - 292 = 8$. .

$n = n + n + n = 312,84 + 8 = 320,84$. .

$K_T = \frac{n}{n} = \frac{312,84}{562} = 0,56$:

:

$$K_T = \frac{n_T}{n} = \frac{312,84}{316} = 0,99$$

:

$$K = \frac{n}{n} = \frac{300}{562} = 0,53$$

:

$$K = \frac{n}{n} = \frac{292}{316} = 0,92$$

:

$$K = \frac{n}{n_T} = \frac{292}{312,84} = 0,93$$

9.

5147

,

51,9%. –

63%,

– 53,3%.

, 1,5%

I II

93,1

10,7

14-15

2371,7

9,2%.

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$$: n = 5147 \cdot 0,519 = 2671,29$$

$$: n_M = 5147 - 2671,29 = 2475,71$$

$$n = 2671,29 \cdot 0,533 = 1423,8$$

$$n_M = 2475,71 \cdot 0,63 = 1559,7$$

:

$$n = n + n_M = 1423,8 + 1559,7 = 2983,5$$

$$p = \frac{n}{n} \cdot 100\% = \frac{2983,5}{5147} \cdot 100\% = 57,97\%$$

I II

$$n = 0,015 \cdot n = 0,015 \cdot 2983,5 = 44,752$$

$$n = n - n = 2983,5 - 44,752 = 2938,742$$

$$K_T = \frac{n}{n} \cdot 100\% = \frac{2938,742}{5147} \cdot 100\% = 57,10\%$$

$$K_T = \frac{n_T}{n} \cdot 100\% = \frac{2938,742}{2983,5} \cdot 100\% = 98,5\%$$

$$n = n + n + n = 2938,742 + 93,1 + 10,7 = 3042,542$$

$$n = n - n = 2371,7 - 2371,7 \cdot 0,092 = 2371,7 - 218,20 = 2153,50$$

$$K = \frac{n}{n} \cdot 100\% = \frac{2153,50}{5147} \cdot 100\% = 0,42\%$$

$$K = \frac{n}{n} \cdot 100\% = \frac{2153,50}{2371,7} \cdot 100\% = 90,8\%$$

$$K = \frac{n}{n} \cdot 100\% = \frac{218,20}{2371,7} \cdot 100\% = 9,2\%$$

10.

:

	• •
	720
	245
	370
,	155
	32
	21
	25
	34

,

:

.

$$720 + 245 + 155 = 1120 \quad . \quad .$$

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:

$$1120 + 25 - 370 - 32 - 21 = 722 \quad . \quad .$$

:

$$722 + 34 = 756 \quad . \quad .$$

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