i	V(ýška)	H(motnost)	P(ohlaví)	Vi-mV	zVi	Hi-mH	zHi	zVi x zHi
1	172	85	1	-0.7	-0.05001	9.75	0.61408	-0.03071
2	170	59	0	-2.7	-0.1929	-16.25	-1.02347	0.197431
3	149	86	0	-23.7	-1.69327	10.75	0.677063	-1.14645
4	176	79	1	3.3	0.235771	3.75	0.236185	0.055686
5	185	86	1	12.3	0.878784	10.75	0.677063	0.594992
6	162	57	0	-10.7	-0.76447	-18.25	-1.14943	0.878707
7	182	73	1	9.3	0.664446	-2.25	-0.14171	-0.09416
8	190	96	1	17.3	1.236013	20.75	1.306888	1.615331
9	154	55	0	-18.7	-1.33604	-20.25	-1.2754	1.703978
10	167	63	1	-5.7	-0.40724	-12.25	-0.77154	0.314202
11	204	93	0	31.3	2.236255	17.75	1.117941	2.5
12	155	52	1	-17.7	-1.26459	-23.25	-1.46434	1.851798
13	174	80	1	1.3	0.09288	4.75	0.299167	0.027787
14	185	110	0	12.3	0.878784	34.75	2.188644	1.923345
15	169	70	1	-3.7	-0.26435	-5.25	-0.33066	0.087409
16	173	65	0	0.3	0.021434	-10.25	-0.64557	-0.01384
17	189	74	0	16.3	1.164567	-1.25	-0.07873	-0.09168
18	154	60	0	-18.7	-1.33604	-15.25	-0.96048	1.283243
19	176	68	1	3.3	0.235771	-7.25	-0.45662	-0.10766
20	168	94	0	-4.7	-0.3358	18.75	1.180923	-0.39655

					kontrola
m	172.7	75.25	rVH	0.586993	0.586993
s	13.997	15.8774086	rVP		0.139274
			rHP		-0.00323

	kontrola
m	172.7
s	13.997

Poznámka	kovariance
	cVH = sV *
	rVH = cVH/

	V(výška)	*H(motnost)*
V(výška)	1	
H(motnost	0.586993	1

r2	kovariance	t	df	p
0.34456	130.4474	3.076115	18	0.007111
0.019397		0.596703	18	0.326638
1.04E-05		-0.01371	18	0.393404

Calculation Notes:

- You will use technology to ca
- The p-value is calculated usi
- The formula for the test stati statistic t has the same sign
- The p-value is the combined

rVH * sH

(sV*sH)

		N		
	t	20	50	100
různé	0	0	0	0
hodnoty	0.1	0.426401	0.696311	0.994937
r	0.2	0.866025	1.414214	2.020726
	0.3	1.334249	2.178819	3.113247
	0.4	1.85164	3.023716	4.320494
	0.5	2.44949	4	5.715476
	0.6	3.181981	5.196152	7.424621
	0.7	4.15862	6.790998	9.703446
	0.8	5.656854	9.237604	13.19933
	0.9	8.759957	14.30495	20.4399
	0.99	29.77453	48.6216	69.4739

ılculate the p-value. The following describes the calculations to compute th
ng a t-distribution with $n-2$ degrees of freedom.
stic is $t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$. The value of the test statistic, t, is shown in the compute
as the correlation coefficient r.
area in both tails.

200	1000
0	0
1.414214	3.175029
2.872281	6.448514
4.425203	9.934953
6.141196	13.7875
8.124038	18.23915
10.55344	23.69335
13.79258	30.96551
18.76166	42.12152
29.05349	65.22754
98.75094	221.7042

ıe test statistics and the p-value:

er or calculator output along with the p-value. The test

i	V(ýška)	H(motnost)	P(ohlaví)	Vi-mV	zVi	Hi-mH	zHi	zVi x zHi	Hi.stř
1	172	85	1	-0.7	-0.05001	9.75	0.61408	-0.03071	74.78389
2	170	59	0	-2.7	-0.1929	-16.25	-1.02347	0.197431	73.45215
3	149	86	0	-23.7	-1.69327	10.75	0.677063	-1.14645	59.46889
4	176	79	1	3.3	0.235771	3.75	0.236185	0.055686	77.44737
5	185	86	1	12.3	0.878784	10.75	0.677063	0.594992	83.4402
6	162	57	0	-10.7	-0.76447	-18.25	-1.14943	0.878707	68.12519
7	182	73	1	9.3	0.664446	-2.25	-0.14171	-0.09416	81.44259
8	190	96	1	17.3	1.236013	20.75	1.306888	1.615331	86.76954
9	154	55	0	-18.7	-1.33604	-20.25	-1.2754	1.703978	62.79824
10	167	63	1	-5.7	-0.40724	-12.25	-0.77154	0.314202	71.45454
11	204	93	0	31.3	2.236255	17.75	1.117941	2.5	96.09172
12	155	52	1	-17.7	-1.26459	-23.25	-1.46434	1.851798	63.46411
13	174	80	1	1.3	0.09288	4.75	0.299167	0.027787	76.11563
14	185	110	0	12.3	0.878784	34.75	2.188644	1.923345	83.4402
15	169	70	1	-3.7	-0.26435	-5.25	-0.33066	0.087409	72.78628
16	173	65	0	0.3	0.021434	-10.25	-0.64557	-0.01384	75.44976
17	189	74	0	16.3	1.164567	-1.25	-0.07873	-0.09168	86.10368
18	154	60	0	-18.7	-1.33604	-15.25	-0.96048	1.283243	62.79824
19	176	68	1	3.3	0.235771	-7.25	-0.45662	-0.10766	77.44737
20	168	94	0	-4.7	-0.3358	18.75	1.180923	-0.39655	72.12041

m	172.7	75.25
s	13.997	15.8774086

	kontrola
m	172.7
s	13.997

		kontrola
rVH	0.586993	0.586993
rVP		0.139274
rHP		-0.00323

R 0.586993

pro vztah H = a+bV+e

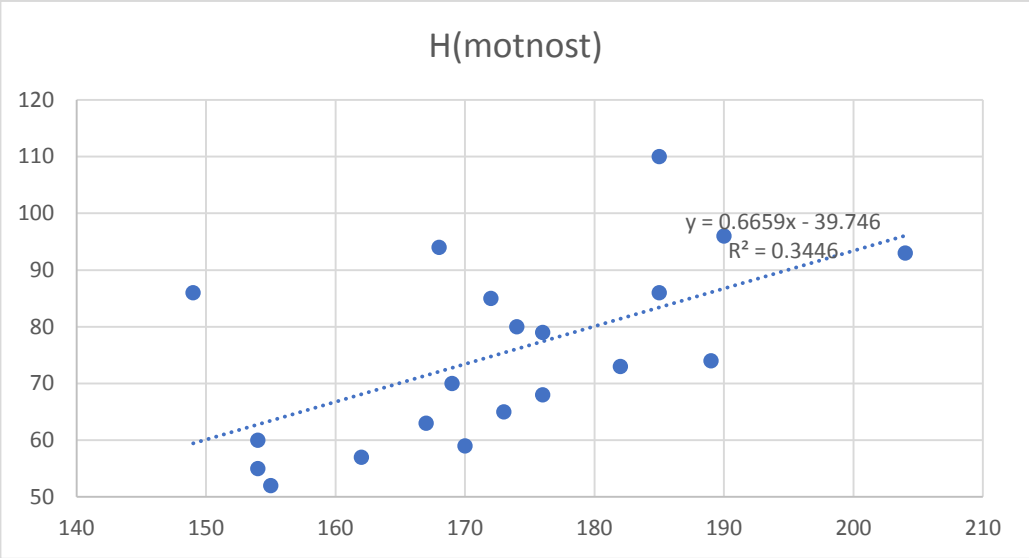
Poznámka kovariance

cVH = sV *

rVH = cVH/

ei
10.21611
-14.4522
26.53111
1.55263
2.559803
-11.1252
-8.44259
9.230455
-7.79824
-8.45454
-3.09172
-11.4641
3.884369
26.5598
-2.78628
-10.4498
-12.1037
-2.79824
-9.44737
21.87959

b	0.66587
a	-39.7457



r2	kovariance t		df	p
0.34456	130.4474	3.076115	18	0.007111
0.019397		0.596703	18	0.326638
1.04E-05		-0.01371	18	0.393404

0.34456

rVH * sH

(sV*sH)

i	V(ýška)	H(motnost)	P(ohlaví)	Vi-mV	zVi	Hi-mH	zHi	zVi x zHi	Hi.stř
1	172	85	1	-0.7	-0.05001	9.75	0.61408	-0.03071	73.43279
2	170	59	0	-2.7	-0.1929	-16.25	-1.02347	0.197431	74.75684
3	149	86	0	-23.7	-1.69327	10.75	0.677063	-1.14645	60.48702
4	176	79	1	3.3	0.235771	3.75	0.236185	0.055686	76.15085
5	185	86	1	12.3	0.878784	10.75	0.677063	0.594992	82.26649
6	162	57	0	-10.7	-0.76447	-18.25	-1.14943	0.878707	69.32072
7	182	73	1	9.3	0.664446	-2.25	-0.14171	-0.09416	80.22794
8	190	96	1	17.3	1.236013	20.75	1.306888	1.615331	85.66406
9	154	55	0	-18.7	-1.33604	-20.25	-1.2754	1.703978	63.8846
10	167	63	1	-5.7	-0.40724	-12.25	-0.77154	0.314202	70.03521
11	204	93	0	31.3	2.236255	17.75	1.117941	2.5	97.86037
12	155	52	1	-17.7	-1.26459	-23.25	-1.46434	1.851798	61.88103
13	174	80	1	1.3	0.09288	4.75	0.299167	0.027787	74.79182
14	185	110	0	12.3	0.878784	34.75	2.188644	1.923345	84.94957
15	169	70	1	-3.7	-0.26435	-5.25	-0.33066	0.087409	71.39424
16	173	65	0	0.3	0.021434	-10.25	-0.64557	-0.01384	76.79539
17	189	74	0	16.3	1.164567	-1.25	-0.07873	-0.09168	87.66764
18	154	60	0	-18.7	-1.33604	-15.25	-0.96048	1.283243	63.8846
19	176	68	1	3.3	0.235771	-7.25	-0.45662	-0.10766	76.15085
20	168	94	0	-4.7	-0.3358	18.75	1.180923	-0.39655	73.39781

m	172.7	75.25
s	13.997	15.8774086

	kontrola
m	172.7
s	13.997

		kontrola
rVH	0.586993	0.586993
rVP		0.139274
rHP		-0.00323
R	0.593233	

pro vztah H = a+bV+e

Poznámka kovariance

cVH = sV *

rVH = cVH/

i	V(ýška)	P(ohlaví)	H(motnost)
1	172	1	85
2	170	0	59
3	149	0	86
4	176	1	79
5	185	1	86
6	162	0	57
7	182	1	73
8	190	1	96
9	154	0	55
10	167	1	63

11	204	0	93
12	155	1	52
13	174	1	80
14	185	0	110
15	169	1	70
16	173	0	65
17	189	0	74
18	154	0	60
19	176	1	68
20	168	0	94

ei				ei	
11.56721				10.21611	VÝSLEDEK
-15.7568				-14.4522	
25.51298		a	-40.7608	26.53111	*Regresní s*
2.849152		b1	0.679515	1.55263	Násobné R
3.733514		b2	-2.68309	2.559803	Hodnota sp
-12.3207				-11.1252	Nastavená
-7.22794		SS	3104.115	-8.44259	Chyba stř. h
10.33594				9.230455	Pozorování
-8.8846		R	0.593233	-7.79824	
-7.03521		R2	0.351925	-8.45454	ANOVA
-4.86037				-3.09172	
-9.88103				-11.4641	Regrese
5.208183				3.884369	Rezidua
25.05043				26.5598	Celkem
-1.39424				-2.78628	
-11.7954				-10.4498	
-13.6676				-12.1037	Hranice
-3.8846				-2.79824	V(ýška)
-8.15085				-9.44737	P(ohlaví)
20.60219				21.87959	

r2	kovariance	t	df	p
0.34456	130.4474	3.076115	18	0.007111
0.019397		0.596703	18	0.326638
1.04E-05		-0.01371	18	0.393404
0.351925				

rVH * sH

(sV*sH)

REZIDUA

Pozorování
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

statistika
0.593233
0.351925
0.275681
13.51277
20

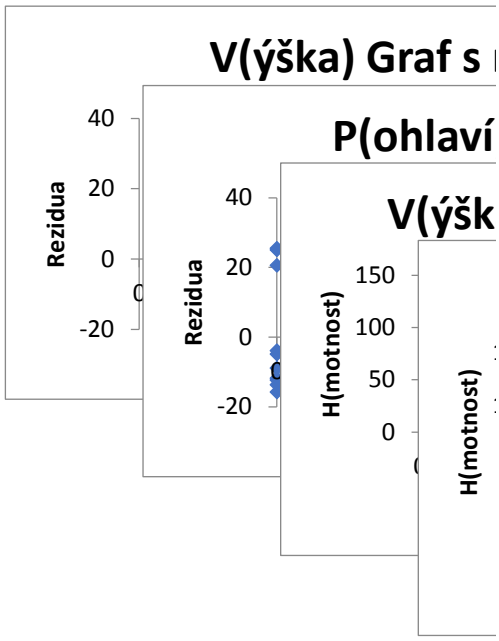
Rozdíl	*SS*	*MS*	*F*	*ýznamnost F*
2	1685.635	842.8174	4.615774	0.02505
17	3104.115	182.595		
19	4789.75			

Koeficienty	*ba stř. hodr*	*t Stat*	*Hodnota P*	*Dolní 95%*	*Horní 95%*	*Dolní 95,0%*	*Horní 95,0%*
-40.7691	38.44023	-1.06059	0.303715	-121.871	40.33266	-121.871	40.33266
0.679562	0.223665	3.038301	0.007422	0.20767	1.151454	0.20767	1.151454
-2.68233	6.102572	-0.43954	0.665805	-15.5576	10.19297	-15.5576	10.19297

PRAVDĚPODOBNOST

ívané H(mo	*Rezidua*	*novaná rezidua*
73.43314	11.56686	0.904947
74.75635	-15.7564	-1.23272
60.48556	25.51444	1.996154
76.15139	2.848614	0.222865
82.26744	3.732559	0.292021
69.31986	-12.3199	-0.96386
80.22876	-7.22876	-0.56555
85.66525	10.33475	0.808552
63.88336	-8.88336	-0.695
70.03533	-7.03533	-0.55042
97.86145	-4.86145	-0.38034
61.88059	-9.88059	-0.77302
74.79226	5.207737	0.407434
84.94978	25.05022	1.959835
71.39445	-1.39445	-0.1091
76.79504	-11.795	-0.9228
87.66802	-13.668	-1.06933
63.88336	-3.88336	-0.30382
76.15139	-8.15139	-0.63773
73.39723	20.60277	1.611883

Percentil	*H(motnost)*
2.5	52
7.5	55
12.5	57
17.5	59
22.5	60
27.5	63
32.5	65
37.5	68
42.5	70
47.5	73
52.5	74
57.5	79
62.5	80
67.5	85
72.5	86
77.5	86
82.5	93
87.5	94
92.5	96
97.5	110

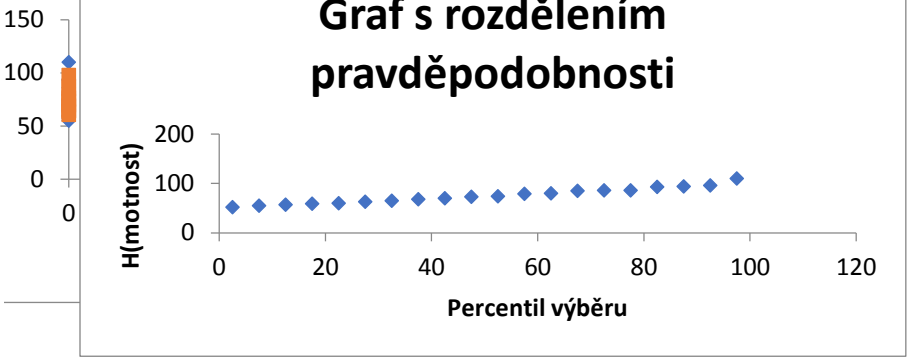

V(ýška) Graf s
P(ohlaví
V(ýšk
Rezidua
40
20
0
-20
Rezidua
40
20
0
-20
H(motnost)
150
100
50
0
H(motnost)

rezidui

) Graf s rezidui

a) Graf porovnání hodnot

P(oblaví) Graf porovnání hodnot



i	V(ýška)	H(motnost)	P(ohlaví)	Vi-mV	zVi	Hi-mH	zHi	zPi	zVi.stř. (z P
1	172	85	1	-0.7	-0.05001	9.75	0.61408	0.974679	0.135747
2	170	59	0	-2.7	-0.1929	-16.25	-1.02347	-0.97468	-0.13575
3	149	86	0	-23.7	-1.69327	10.75	0.677063	-0.97468	-0.13575
4	176	79	1	3.3	0.235771	3.75	0.236185	0.974679	0.135747
5	185	86	1	12.3	0.878784	10.75	0.677063	0.974679	0.135747
6	162	57	0	-10.7	-0.76447	-18.25	-1.14943	-0.97468	-0.13575
7	182	73	1	9.3	0.664446	-2.25	-0.14171	0.974679	0.135747
8	190	96	1	17.3	1.236013	20.75	1.306888	0.974679	0.135747
9	154	55	0	-18.7	-1.33604	-20.25	-1.2754	-0.97468	-0.13575
10	167	63	1	-5.7	-0.40724	-12.25	-0.77154	0.974679	0.135747
11	204	93	0	31.3	2.236255	17.75	1.117941	-0.97468	-0.13575
12	155	52	1	-17.7	-1.26459	-23.25	-1.46434	0.974679	0.135747
13	174	80	1	1.3	0.09288	4.75	0.299167	0.974679	0.135747
14	185	110	0	12.3	0.878784	34.75	2.188644	-0.97468	-0.13575
15	169	70	1	-3.7	-0.26435	-5.25	-0.33066	0.974679	0.135747
16	173	65	0	0.3	0.021434	-10.25	-0.64557	-0.97468	-0.13575
17	189	74	0	16.3	1.164567	-1.25	-0.07873	-0.97468	-0.13575
18	154	60	0	-18.7	-1.33604	-15.25	-0.96048	-0.97468	-0.13575
19	176	68	1	3.3	0.235771	-7.25	-0.45662	0.974679	0.135747
20	168	94	0	-4.7	-0.3358	18.75	1.180923	-0.97468	-0.13575

m	172.7	75.25	0.5	rVH	0.586993	
s	13.997	15.8774086				

	kontrola		
m	172.7	75.25	0.5
s	13.997	15.8774086	0.512989

i	V(ýška)	P(ohlaví)	H(motnost)
1	172	1	85
2	170	0	59
3	149	0	86
4	176	1	79
5	185	1	86
6	162	0	57
7	182	1	73
8	190	1	96
9	154	0	55
10	167	1	63

11	204	0	93
12	155	1	52
13	174	1	80
14	185	0	110
15	169	1	70
16	173	0	65
17	189	0	74
18	154	0	60
19	176	1	68
20	168	0	94

zHi.stř. (z P	eVi	eHi
-0.00315	-0.18576	0.617229
0.003149	-0.05716	-1.02662
0.003149	-1.55752	0.673913
-0.00315	0.100024	0.239334
-0.00315	0.743037	0.680212
0.003149	-0.62872	-1.15258
-0.00315	0.528699	-0.13856
-0.00315	1.100266	1.310037
0.003149	-1.20029	-1.27855
-0.00315	-0.54299	-0.76839
0.003149	2.372002	1.114791
-0.00315	-1.40034	-1.4612
-0.00315	-0.04287	0.302316
0.003149	1.014531	2.185495
-0.00315	-0.4001	-0.32751
0.003149	0.157181	-0.64872
0.003149	1.300314	-0.08188
0.003149	-1.20029	-0.96363
-0.00315	0.100024	-0.45347
0.003149	-0.20005	1.177774

1. model

V = bV * P

rVP	0.139273582	0.139274
bV	0.139273582	

2. model

H = bH * P

rHP	-0.003230938	-0.00323
bH	-0.003230938	
rVH.P	0.593227307	

Kontrola

vzorec	0.593227307
	0.593233009

Maticové násobení

B =

b1
b2
b3
b4
b5

$\mathbf{B}^T$ =

b1	b2	b3	b4	b5

B x $\mathbf{B}^T$

b1 b1	b1 b2	b1 b3	b1 b4	b1 b5
b2 b1	b2 b2	b2 b3	b2 b4	b2 b5
b3 b1	b3 b2	b3 b3	b3 b4	b3 b5
b4 b1	b4 b2	b4 b3	b4 b4	b4 b5
b5 b1	b5 b2	b5 b3	b5 b4	b5 b5

$\mathbf{B}^T$ **x B** b1 b1 + b2

B x $\mathbf{B}^T$

1	2	3	4	5
2	4	6	8	10
3	6	9	12	15
4	8	12	16	20
5	10	15	20	25

2faktorové řešení s nekorelovanými faktory (nákres chybí)

Implikované korelace

r12^ = b11*b12 + b21*b22

r13^ = b11*b13 + b21*b23

r2k^ = b12*b1k + b22*b2k

sloupec pro každý faktor

B =

b11	b21
b12	b22
b13	b23
b14	b24
b15	b25

řádek pro každou prom

B - matice faktorových nábojů
tzn. regresních koeficientů mezi faktory a proměnnými

B x $\mathbf{B}^T$

b11*b11+b21*b21	b11*b12+b

B x $\mathbf{B}^T$

r11^	r12^

B =

1	100
2	200
3	300
4	400
5	500

$\mathbf{B}^T$ =

1	2	3	4
100	200	300	400

$\mathbf{R^2=BxB^T=}$

10001	20002	30003	40004
20002	40004	60006	80008
30003	60006	90009	120012
40004	80008	120012	160016
50005	100010	150015	200020

2faktorové řešení s **korelovanými** faktory (nákres chybí)

Implikované korelace

r12^ = b11*b12 + b21*b22 + b11*rF12*b22 + b12*rF12*b21

r13^ = b11*b13 + b21*b23 + b11*rF12*b23 + b13*rF12*b21

$\mathbf{R^2 = B}$ x **F** x $\mathbf{B^T}$ =

r2k^ = b12*b1k + b22*b2k + b12*rF12*b2k + b1k*rF12*b22

Příkla

B =

1
2
3
4
5

B^{T} =

1	2	3	4

b2 + b3 b3 + b4 b4 + b5 b5

ěnnou

B^{T} =

b11	b12	b13	b14	b15
b21	b22	b23	b24	b25

21*b22	b11*b13+b21*b23		
		b13*b14+b23*b24	

	r13^		
		r34^	

5
500

50005
100010
150015
200020
250025

B

	F1	F2	F3
X1			
X2			
X3			
X4			
X5			

F

	F1	F2	F3	
F1				F1
F2				F2
F3				F3

d násobení

B

	F1	F2	F3
X1	1	10	100
X2	2	20	200
X3	3	30	300
X4	4	40	400
X5	5	50	500

F

	F1	F2	F3	
F1	1	0.1	0.2	F1
F2	0.1	1	0.3	F2
F3	0.2	0.3	1	F3

Mezivýpočet B x F

22	40.1	103.2
44	80.2	206.4
66	120.3	309.6
88	160.4	412.8
110	200.5	516

Finální výpočet

10743	21486
21486	42972
32229	64458
42972	85944
53715	107430

B^T

X1	X2	X3	X4	X5

B^T

X1	X2	X3	X4	X5
1	2	3	4	5
10	20	30	40	50
100	200	300	400	500

$B \times F \times B^T$

32229	42972	53715
64458	85944	107430
96687	128916	161145
128916	171888	214860
161145	214860	268575

Generování dat (mění se při každém přepočtu listu)

i	X	Y	Z	oXY	oXZ	xYZ	sXY	sXZ	sYZ	uXY	uXZ	uYZ	V
1	9	11	3	41	25	29	100	27	34	14.32211	9.800533	11.92321	297.9893
2	8	2	5	20	26	15	16	41	10	8.261543	9.797453	5.559329	80.42342
3	9	16	3	51	25	39	144	27	49	19.15511	9.870838	16.27971	432.9893
4	11	17	3	57	29	41	187	33	51	20.5395	11.6041	17.50529	561.0402
5	4	16	4	40	17	41	65	16	64	16.91764	6.322784	17.01565	256.9649
6	4	9	5	26	19	29	36	21	45	10.75807	7.223834	10.48432	180.0938
7	7	5	5	24	24	21	35	35	26	8.789043	9.042659	7.476281	175.2094
8	2	6	5	17	14	23	12	11	31	6.536234	6.336069	7.93239	60.57764
9	7	9	4	33	22	26	63	29	36	12.13046	9.021059	10.13088	252.7478
10	4	16	6	40	21	44	65	25	97	16.63644	8.016981	17.23483	384.5016
11	6	13	6	39	25	39	79	36	79	14.4456	9.234975	14.88077	468.4957
12	9	5	5	28	28	20	45	46	26	10.81801	10.95525	7.986225	225.3641
13	9	12	4	42	26	32	109	36	48	15.08554	10.337	13.11594	432.11
14	6	15	2	43	16	34	90	13	30	16.66993	6.737997	15.40292	180.9351
15	5	6	6	22	23	25	30	30	36	8.702612	8.700076	8.639754	180.994
16	8	3	4	23	25	15	24	33	12	8.695529	9.210905	5.712894	96.54867
17	10	8	2	37	25	20	80	21	17	13.45921	10.40927	8.746537	160.909
18	9	12	5	42	28	34	109	46	61	15.68024	10.65162	13.26124	540.6121
19	6	5	4	23	21	18	30	24	20	8.046091	7.557593	7.206172	120.4792
20	7	3	4	21	23	15	21	29	12	7.864211	8.095869	5.706504	84.25641
21	3	4	5	14	16	19	13	15	21	5.360963	6.24605	6.949589	60.63597
22	6	13	6	38	25	39	79	36	78	15.03309	8.555582	14.64686	468.6626
23	3	3	4	13	14	14	9.2	13	12	4.356608	5.904248	5.666097	36.73205
24	7	8	3	31	20	22	57	21	24	11.13021	8.418419	8.586588	168.0562
25	4	9	4	27	17	26	36	17	36	9.882931	5.671942	10.73011	144.4101
26	3	16	5	38	16	43	49	16	81	16.3981	6.666698	17.20564	240.4722
27	2	14	6	33	16	41	29	13	84	15.01979	6.493737	15.89482	168.5736
28	9	8	2	35	23	21	73	19	17	12.18906	9.820158	8.322722	144.6848
29	3	15	4	36	14	39	45	12	60	16.03962	5.558261	15.78063	180.3838
30	8	2	6	20	28	17	16	48	13	9.235937	10.23408	6.523613	96.99277
31	3	4	1	15	8.4	11	13	3.4	4.9	5.380357	3.349862	4.809474	12.95212
32	5	7	4	24	18	22	35	21	29	9.142225	6.464715	8.50293	140.8032
33	3	8	1	23	8.7	19	24	3.7	8.9	9.021771	4.033449	8.1339	24.87672
34	2	7	4	19	12	23	15	9	28	7.792545	5.088024	8.237621	56.68553
35	11	6	5	35	33	23	66	56	30	13.09081	12.1914	7.952999	330.3201
36	5	2	4	14	18	13	10	20	8.6	6.126368	6.770977	4.815787	40.9315
37	2	14	5	32	14	39	28	10	70	14.46301	5.44755	15.14839	140.6973
38	3	9	3	25	13	24	27	9.7	27	9.48834	4.732057	9.61581	81.16472
39	5	8	4	27	19	24	40	20	32	10.05517	7.368978	9.334774	160.6533
40	8	10	4	36	25	29	81	32	41	12.9777	9.21188	10.84044	320.3823
41	6	9	3	31	19	24	54	18	28	10.86202	6.887312	9.584867	162.6871
42	10	12	6	45	32	37	121	61	73	16.4863	12.23106	14.04587	720.046
43	9	8	4	35	27	25	72	36	33	12.54081	10.05021	9.686426	288.3752
44	2	1	3	6.3	10	8	2.7	6.2	3.5	2.299813	4.022143	3.700668	6.121667
45	4	5	5	18	19	21	21	20	26	7.303372	7.307222	7.862858	100.5398
46	11	15	5	52	32	40	165	56	75	19.54625	12.82341	16.23838	825.0897
47	8	3	2	22	20	10	24	16	6.9	9.085445	9.145416	4.009216	48.36899
48	9	8	2	35	22	20	72	19	17	12.49955	10.072	9.176674	144.1291

49	12	13	4	50	32	35	156	48	52	18.47231	12.73915	14.4925	624.3993
50	10	16	4	52	28	41	160	40	64	19.0522	11.57338	17.48216	640.9455
51	9	15	2	49	23	35	136	19	30	18.2982	10.11333	15.57366	270.0971
52	7	8	6	31	26	28	56	43	49	11.1231	9.955939	10.42205	336.8366
53	3	16	4	38	14	41	49	13	64	16.87257	5.684113	17.37416	192.9311
54	4	8	5	25	19	27	33	20	40	9.637902	6.708342	9.972179	160.699
55	3	5	6	16	18	23	16	19	30	5.948418	7.563824	8.775197	90.48254
56	3	12	2	30	10	28	37	6.1	25	12.48266	4.307647	12.18648	72.93485
57	8	9	1	35	19	20	73	8.5	9.9	12.70834	8.660572	9.574529	72.32527
58	6	2	7	16	27	19	13	43	14	7.110825	9.912774	7.424393	84.50305
59	4	11	4	31	16	31	45	16	45	11.98746	6.20863	11.74477	176.9332
60	3	8	4	23	15	24	24	12	32	8.80914	5.881869	9.429366	96.38737
61	10	4	3	28	27	14	41	31	12	11.56092	11.1081	5.063333	120.449
62	3	12	5	30	16	35	36	15	60	12.81902	6.59116	13.75734	180.7632
63	4	5	4	18	16	18	20	17	20	6.520388	5.82771	6.610281	80.33923
64	4	17	7	42	23	49	68	29	119	17.60923	9.019021	18.89887	476.3793
65	2	10	6	24	16	32	21	13	61	10.74612	7.00122	11.90102	120.0429
66	3	9	4	25	14	26	28	13	36	10.35992	5.897984	10.4913	108.2348
67	4	15	3	38	15	37	60	12	45	15.75391	5.426236	15.78594	180.0469
68	2	15	3	35	11	36	31	6.7	46	15.59243	4.428849	15.5198	90.2652
69	8	14	3	45	22	35	113	25	42	16.30355	8.547824	14.81649	336.1929
70	3	12	4	31	14	32	37	12	48	12.97348	5.197419	12.69366	144.9292
71	10	8	3	36	26	23	80	30	25	13.61136	11.42104	8.920609	240.789
72	6	14	4	40	20	37	85	25	57	15.44218	7.710702	14.70353	336.481
73	11	9	4	41	31	26	99	45	37	14.27822	12.32759	10.04595	396.3839
74	5	13	4	36	19	35	66	20	53	14.24747	6.893204	13.60839	260.7282
75	4	11	6	31	21	35	44	24	66	12.46398	8.156293	12.89283	264.5795
76	2	6	3	16	11	19	13	6	18	6.585914	4.524652	7.219867	36.0367
77	6	11	6	35	24	34	66	37	67	12.83317	9.118021	12.88823	396.9019
78	5	6	1	23	12	15	30	5.7	6.6	8.768688	5.673481	6.488055	30.60199
79	8	8	4	33	24	25	65	33	32	11.68452	9.283566	9.843607	256.2148
80	4	15	3	39	15	37	61	12	46	15.77254	5.192352	16.21301	180.4533
81	8	17	5	50	26	44	136	41	85	19.63955	10.04522	17.73842	680.7612
82	8	14	6	44	28	41	112	49	85	16.64671	10.25562	15.24528	672.156
83	8	7	5	30	26	25	57	40	36	11.27522	9.728652	9.104581	280.1086
84	2	15	2	35	8.8	34	31	4.3	31	15.88903	3.160726	15.61739	60.86923
85	10	9	3	38	27	24	90	30	28	13.98607	11.25342	10.36022	270.3415
86	10	14	5	48	30	38	140	51	70	17.96189	11.79922	15.59261	700.516
87	11	14	2	51	27	32	155	22	29	18.48726	11.90871	14.82464	308.5588
88	5	16	6	42	23	44	81	30	97	17.61622	8.453221	17.21161	480.7841
89	6	5	5	23	22	20	30	31	25	8.430065	8.475919	7.692489	150.9673
90	5	7	6	24	23	27	35	31	43	8.863974	7.959765	9.976632	210.0377
91	3	12	5	30	16	34	37	16	60	13.22893	6.293151	13.98333	180.3677
92	8	11	3	38	23	28	88	25	33	13.99391	9.008686	12.24266	264.7095
93	3	16	7	38	21	47	48	22	112	16.30567	7.966628	18.35411	336.4253
94	3	10	5	26	16	31	31	16	51	11.41827	5.962357	11.3823	150.1929
95	2	4	4	12	12	17	8.2	9	17	5.011286	5.41108	5.823686	32.52811
96	4	2	4	13	16	12	8.2	17	8.6	4.585977	6.12577	5.425002	32.47509
97	7	14	2	42	19	32	98	15	28	15.74014	7.696851	15.13097	196.3561
98	9	5	5	29	28	20	45	46	26	11.24675	10.66704	7.072068	225.7777

99	4	7	4	23	16	22	29	16	28	8.41811	6.541908	8.541423	112.1028
100	4	5	3	19	15	17	21	13	16	6.890667	5.895394	5.869446	60.58315

Jedna z variant vygenerovaných (simulovaných) dat

i	X	Y	Z	oXY	oXZ	xYZ	sXY	sXZ
1	5	13	4	36.42163	18.17098	34.5559	65.77884	20.3398
2	9	8	4	34.23967	26.95884	24.30217	72.66137	36.55568
3	2	2	3	8.478387	10.39464	10.24642	4.705854	6.422325
4	2	16	6	36.52983	16.91766	44.59011	32.88246	12.44234
5	8	10	2	36.8324	20.613	24.06939	80.62791	16.45103
6	3	12	4	30.2527	14.80534	32.6389	36.74291	12.42774
7	4	8	2	24.91355	12.91183	20.97684	32.80866	8.330778
8	5	5	3	20.8622	16.36293	16.19635	25.47229	15.82703
9	5	4	5	18.42525	20.40274	18.10284	20.28589	25.14586
10	8	3	6	22.77599	28.28469	18.25974	24.77219	48.06369
11	8	14	4	44.96498	24.69329	36.12954	112.5362	32.77279
12	10	15	1	50.64446	22.60604	32.18087	150.7876	10.70089
13	5	7	5	24.40571	20.24221	24.89663	35.71366	25.09363
14	8	15	3	46.39849	22.20985	36.43828	120.254	24.06126
15	3	7	4	20.58931	14.75799	22.98907	21.31704	12.44001
16	11	2	6	26.89	34.16742	16.52352	22.79179	66.13392
17	3	8	6	22.13929	18.26524	28.57587	24.32623	18.68216
18	9	13	6	44.61967	30.45109	38.54899	117.4378	54.76014
19	6	6	4	24.94182	20.41139	20.97464	36.28325	24.14747
20	9	11	6	40.78254	30.24674	34.41206	99.41663	54.06358
21	10	10	3	40.64098	26.90279	26.74051	100.8055	30.91476
22	8	7	5	30.55379	26.33334	24.72408	56.03387	40.42378
23	8	13	4	42.60656	24.31712	34.88258	104.7956	32.94437
24	7	13	5	40.17993	24.85762	36.46213	91.99991	35.32265
25	7	2	2	18.8392	18.05051	8.776038	14.89371	14.54397
26	6	16	6	44.27335	24.36918	44.48632	96.78095	36.59084
27	11	15	3	52.80539	28.00155	36.78408	165.9383	33.43723
28	11	2	4	26.06607	30.06465	12.14773	22.61326	44.81276
29	12	3	4	30.61317	32.37676	14.56758	36.53039	48.17575
30	5	7	5	24.36841	20.57919	24.48665	35.65086	25.96748
31	6	8	5	28.74727	22.17202	26.67156	48.54555	30.08193
32	9	13	6	44.91428	30.80235	38.78695	117.265	54.23869
33	4	15	6	38.43282	20.60305	42.40965	60.60683	24.82658
34	12	12	2	48.79875	28.38171	28.88479	144.0874	24.40461
35	9	10	2	38.02614	22.90337	24.86389	90.19735	18.832
36	5	11	3	32.60259	16.33462	28.45195	55.89642	15.06918
37	8	9	5	34.07602	26.55692	28.2798	72.7631	40.14119
38	5	14	1	38.79502	12.53047	30.64797	70.09291	5.241257
39	5	16	4	42.28846	18.71903	40.35771	80.1752	20.31444
40	6	16	6	44.21184	24.49558	44.31465	96.28784	36.5758
41	4	14	5	36.44157	18.06773	38.94864	56.7628	20.07127
42	1	12	4	26.45738	10.95323	32.53852	12.56543	4.262532
43	11	16	6	54.49468	34.28834	44.78116	176.5312	66.95773
44	7	14	5	42.87488	24.49582	38.57597	98.14962	35.17632
45	5	13	2	36.95638	14.05735	30.95764	65.20625	10.72392
46	5	10	7	30.34537	24.96585	34.33061	50.16602	35.41904
47	5	9	3	28.23693	16.63218	24.64645	45.28991	15.48105
48	2	1	4	6.227652	12.4013	10.2322	2.014554	8.098278

49	11	8	5	38.83048	32.15857	26.24168	88.77734	55.39065
50	10	4	6	28.34356	32.21703	20.73441	40.16824	60.94816
51	9	4	5	26.95002	28.20967	18.35326	36.40929	45.7974
52	11	12	3	46.19158	28.33623	30.44374	132.3583	33.91806
53	10	4	5	28.47896	30.643	18.47272	40.15985	50.29236
54	8	16	2	48.22745	20.37525	36.20179	128.5584	16.78954
55	4	5	2	18.11148	12.65238	14.61446	20.92129	8.341353
56	9	4	5	26.66357	28.60013	18.18599	36.26819	45.20033
57	8	9	3	34.06406	22.6312	24.22899	72.3299	24.72117
58	7	14	3	42.16392	20.85929	34.86672	98.15842	21.01321
59	8	8	5	32.19585	26.93961	26.35412	64.22109	40.79436
60	6	5	5	22.12213	22.22466	20.86799	30.84863	30.645
61	10	9	7	38.38931	34.78653	32.54682	90.60029	70.62928
62	10	8	3	36.44192	26.02548	22.28405	80.57821	30.09085
63	8	7	5	30.64631	26.33546	24.67477	56.33814	40.34486
64	3	3	5	12.6318	16.57112	16.61971	9.746317	15.89984
65	9	6	3	30.40941	24.28356	18.1122	54.27888	27.02614
66	5	10	2	30.97011	14.85484	24.3823	50.63846	10.28781
67	9	5	6	28.44271	30.95602	22.10302	45.88973	54.65151
68	3	6	2	18.99404	10.93049	16.40079	18.01761	6.305895
69	6	15	4	42.99981	20.89807	38.76437	90.00881	24.34327
70	6	15	4	42.15716	20.29754	38.06807	90.8569	24.84533
71	6	12	7	36.21907	26.65846	38.91052	72.19287	42.46058
72	11	5	5	32.93625	32.43273	20.97234	55.98612	55.21551
73	7	9	2	32.93137	18.17163	22.7888	63.93986	14.376
74	8	6	6	28.65292	28.22043	24.7587	48.18581	48.8366
75	10	12	6	44.29273	32.96723	36.8402	120.3863	60.40447
76	8	1	3	18.39626	22.50035	8.63459	8.474249	24.33764
77	2	15	2	34.69376	8.47822	34.15681	30.8114	4.850696
78	6	7	5	26.09749	22.0903	24.7746	42.25209	30.50822
79	5	11	6	32.06808	22.24809	34.35114	55.26124	30.31926
80	8	4	2	24.23434	20.55738	12.68216	32.92168	16.03633
81	9	7	5	32.65633	28.79749	24.68639	63.97168	45.60927
82	9	3	7	24.18286	32.68693	20.74021	27.54031	63.38722
83	6	9	2	30.68167	16.03866	22.46549	54.34928	12.69175
84	8	7	3	30.98291	22.77889	20.65931	56.85224	24.06204
85	11	2	3	26.50928	28.63497	10.46557	22.61819	33.53085
86	9	15	5	48.58044	28.47953	40.15922	135.7375	45.01021
87	6	8	5	28.77488	22.10298	26.69889	48.70485	30.02298
88	2	15	6	34.63525	16.81221	42.90599	30.50758	12.90862
89	10	12	2	44.10408	24.35172	28.46099	120.1064	20.87065
90	6	15	5	42.75991	22.21804	40.82877	90.7819	30.30957
91	6	14	6	40.07294	24.22491	40.53359	84.61621	36.4038
92	6	6	3	24.9688	18.02744	18.79244	36.54483	18.60059
93	6	9	6	30.4041	24.23537	30.72001	54.64813	36.3654
94	9	14	3	46.14714	24.79483	34.47532	126.3821	27.9874
95	12	9	3	42.31636	30.50926	24.16444	108.2446	36.98679
96	2	16	5	36.38596	14.33915	42.56409	32.335	10.87856
97	2	8	4	20.8496	12.28435	24.29757	16.62088	8.826804
98	5	9	7	28.02159	24.43417	32.26405	45.3393	35.56544

99	4	15	2	38.51007	12.84354	34.556	60.70897	8.804959
100	9	9	3	36.1695	24.21523	24.03379	81.60309	27.26911

sYZ	uXY	uXZ	uYZ	V
52.33233	14.76319	6.840097	14.13318	260.3318
32.01131	12.9868	10.08067	9.715835	288.2636
6.223875	3.161378	4.079487	3.800284	12.53778
96.79591	16.59406	7.168067	17.57797	192.6109
20.78127	12.85994	9.187229	10.55395	160.619
48.87641	12.78096	5.973134	12.849	144.7426
16.1422	9.138961	5.184547	8.488307	64.95934
15.47484	7.755341	6.715437	5.909985	75.63437
20.44343	7.049208	7.669734	7.359421	100.7835
18.48864	9.065298	10.1702	7.044367	144.3007
56.96123	16.22064	9.413909	14.97126	448.829
15.24258	18.15223	11.00416	15.26289	150.5538
35.41702	9.435585	7.765507	9.133952	175.2607
45.49413	17.29689	8.692289	16.15008	360.3102
28.00527	8.539154	5.236228	8.806349	84.93957
12.58605	11.68427	13.06815	7.305189	132.2287
48.06196	9.017517	7.27636	10.52778	144.0781
78.20975	16.41691	11.72834	15.28162	702.7696
24.90375	8.532438	8.183437	7.728703	144.0817
66.54628	14.84335	11.46832	12.57559	594.5417
30.09152	14.84932	10.69416	11.15276	300.6983
35.50126	11.0421	9.79396	8.937769	280.1672
52.58494	15.3881	9.672952	13.86199	416.5673
65.44829	15.15425	9.428284	14.34667	455.8388
4.504622	7.669276	8.124666	3.482889	28.74223
96.45858	17.88318	9.333493	17.17458	576.3416
45.63059	18.87135	11.80909	16.14744	495.3264
8.313193	11.77698	12.14009	4.623758	88.96798
12.08395	12.82449	13.07846	5.117975	144.2482
35.78638	9.221997	7.147989	8.719538	175.0941
40.8843	10.39865	7.813715	10.32502	240.0348
78.00105	16.74433	11.56055	15.26654	702.5135
90.93821	16.28715	7.764081	16.87355	360.0543
24.75036	17.04987	13.13556	12.32479	288.8921
20.12235	14.08119	9.483445	11.13548	180.3385
33.26636	13.05855	5.878545	11.52121	165.5237
45.96807	12.9966	9.73981	10.87329	360.8244
14.41725	15.73313	5.628372	14.35166	70.53972
64.19703	16.87404	7.22813	16.74276	320.0045
96.45902	17.7191	9.475769	17.33227	576.1344
70.6323	15.4152	7.197691	15.52297	280.122
48.42286	12.48426	4.261887	13.30675	48.23944
96.40845	19.76961	13.21632	17.69037	1056.442
70.13506	16.24558	8.730539	15.24992	490.5187
26.11454	14.35026	6.289211	13.16971	130.8359
70.36809	11.62652	8.976835	12.5674	350.7832
27.85437	10.79335	6.526699	10.25896	135.0942
4.671647	3.096022	4.893882	4.544669	8.265121

	oXY	oXZ
oXY	1	0.370819
oXZ	0.370819	1
xYZ	0.770466	0.037416
sXY	0.927531	0.432517
sXZ	0.244237	0.938121
sYZ	0.569536	0.165386
uXY	0.969728	0.28928
uXZ	0.437382	0.968057
uYZ	0.81535	-0.03491
V	0.723869	0.601516

40.06033	14.59287	12.85498	10.41276	440.2417
24.92708	10.83805	11.87282	7.445129	240.3765
20.79762	10.25954	10.70618	6.690504	180.6143
36.82472	17.08753	11.49123	12.89741	396.9993
20.57174	11.59213	11.68954	7.011573	200.2613
32.42199	18.82679	9.116424	16.80019	256.8503
10.17108	7.340219	4.640845	6.254869	40.11495
20.23824	10.55028	10.88453	6.997264	180.8186
27.04541	12.66615	9.265908	9.909159	216.2138
42.91287	16.62851	8.578548	14.67694	294.6812
40.86302	11.86531	9.831224	9.535652	320.5335
25.008	7.963798	8.618387	7.215492	150.4379
63.75914	14.42146	12.71779	11.82101	630.0333
24.60417	13.7689	11.12602	8.65517	240.0287
35.96031	11.25263	9.461849	9.416485	280.4526
15.15868	5.130026	6.253309	5.958784	45.94332
18.16043	10.96974	10.25327	7.327881	162.0301
20.29179	12.15127	5.97139	10.53351	100.3951
30.18613	11.18574	10.85693	8.285624	270.9334
12.73468	6.947387	4.50208	6.915621	36.45518
60.09105	16.34154	7.489011	16.06321	360.3425
60.02897	16.29122	8.089868	16.20293	360.7372
84.01999	14.08525	9.770567	14.16511	504.134
25.8174	12.20366	12.83802	7.864546	275.6823
18.39844	12.07057	8.168516	10.16891	126.6697
36.00519	10.48565	10.18893	8.731332	288.3146
72.50619	16.2509	12.53799	13.7273	720.9489
3.610601	8.473191	9.311594	4.045194	24.1271
30.63862	15.45682	2.925761	15.91127	60.31322
35.97274	9.589667	8.651283	9.518139	210.5839
66.93423	12.56134	8.36205	12.57128	330.8126
8.161225	9.849932	8.247569	5.002625	64.35445
35.48799	11.70571	11.28332	9.523178	315.041
21.60969	9.5705	11.61263	8.394612	189.6722
18.52633	10.84126	6.594476	10.16793	108.319
21.32803	11.47426	8.994852	7.640021	168.5668
6.321016	11.33541	11.42562	3.860861	66.7399
75.70153	17.88229	11.25018	16.6565	675.1438
40.20727	10.40366	8.259538	9.477387	240.0057
90.02673	15.89813	6.511878	16.94781	180.7587
24.68947	16.38419	10.81377	12.80735	240.5766
75.87228	16.4991	7.952142	16.77261	450.0936
84.44573	16.03165	8.870345	15.40664	504.3292
18.61199	9.386807	7.304184	6.823279	108.8753
54.56573	10.9985	9.427616	10.84062	324.1458
42.97004	17.11945	9.921057	15.19412	378.0703
27.13336	15.43894	12.66472	10.00615	324.4893
80.62963	16.7913	5.671731	17.19238	160.1947
32.10251	8.594636	5.126162	9.193312	64.04629
63.47043	10.4923	8.92785	11.46651	315.6064

30.70965	15.75613	5.345198	15.67604	120.1408
27.82213	12.74982	10.24336	9.686798	243.1254

xYZ	sXY	sXZ	sYZ	uXY	uXZ	uYZ	V
0.770466	0.927531	0.244237	0.569536	0.969728	0.437382	0.81535	0.723869
0.037416	0.432517	0.938121	0.165386	0.28928	0.968057	-0.03491	0.601516
1	0.61741	0.067271	0.902951	0.818492	0.009837	0.975593	0.685905
0.61741	1	0.285871	0.431612	0.827222	0.510988	0.663815	0.75976
0.067271	0.285871	1	0.250886	0.183636	0.842546	-0.03544	0.633919
0.902951	0.431612	0.250886	1	0.62743	0.084279	0.803578	0.754879
0.818492	0.827222	0.183636	0.62743	1	0.346913	0.865584	0.661122
0.009837	0.510988	0.842546	0.084279	0.346913	1	-0.03092	0.548388
0.975593	0.663815	-0.03544	0.803578	0.865584	-0.03092	1	0.610418
0.685905	0.75976	0.633919	0.754879	0.661122	0.548388	0.610418	1