

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

$$cVH = sV * rVH$$

$$rVH = cVH / sV$$

	V(yška)	H(motnost)
V(yška)	1	
H(motnost)	0.586993	1

r ²	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 calculate the p -value.
- The p -value is calculated using the test statistic t .
- The formula for the test statistic t has the same sign as the correlation coefficient r .
- The p -value is the combined probability of observing a test statistic as extreme as the one calculated, assuming the null hypothesis is true.

	t	N		
		20	50	100
různé hodnoty	0	0	0	0
r _{VH} * s _H	0.1	0.426401	0.696311	0.994937
	0.2	0.866025	1.414214	2.020726
	0.3	1.334249	2.178819	3.113247
(s _V *s _H)	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

Calculate the p -value. The following describes the calculations to compute the p -value using a t -distribution with $n - 2$ degrees of freedom.

The test statistic is $t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$. The value of the test statistic, t , is shown in the computer output 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

the test statistics and the p -value:

enter 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

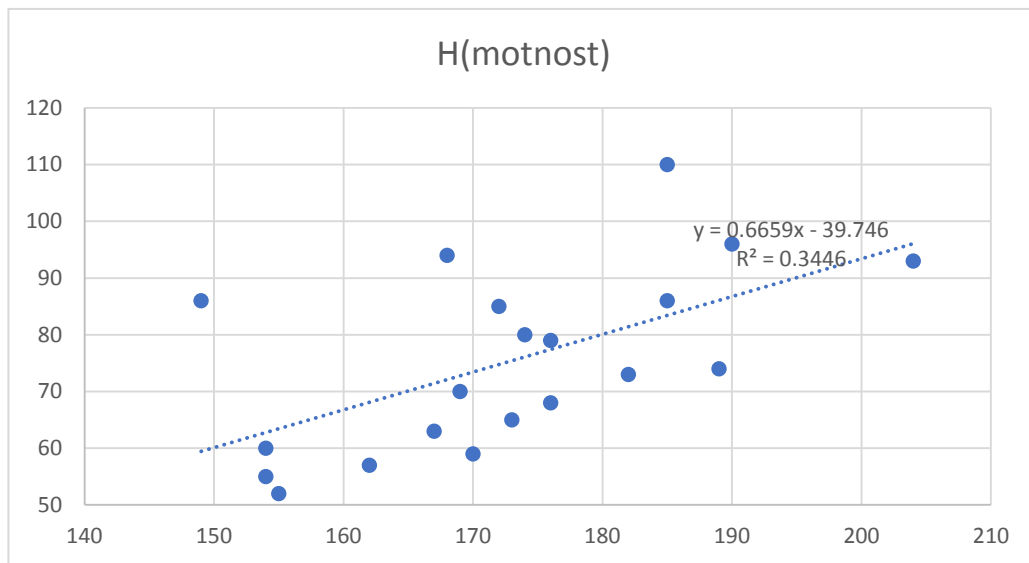
R 0.586993
pro vztah $H = a+bV+e$

Poznámka kovariance
 $cVH = sV * rVH$
 $rVH = cVH /$

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/

ei				ei
11.56721				10.21611
-15.7568				-14.4522
25.51298	a	-40.7608		26.53111
2.849152	b1	0.679515		1.55263
3.733514	b2	-2.68309		2.559803
-12.3207				-11.1252
-7.22794	SS	3104.115		-8.44259
10.33594				9.230455
-8.8846	R	0.593233		-7.79824
-7.03521	R2	0.351925		-8.45454
-4.86037				-3.09172
-9.88103				-11.4641
5.208183				3.884369
25.05043				26.5598
-1.39424				-2.78628
-11.7954				-10.4498
-13.6676				-12.1037
-3.8846				-2.79824
-8.15085				-9.44737
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)