

1. Použijte neparametrický Spearmanův korelační koeficient pro vyjádření korelace všech dvou proměnných.
2. Testujte normalitu u jednotlivých proměnných.
3. U proměnných s normálním rozdělením testujte korelaci rovněž za použití Pearsonova parametrického korelačního koeficientu.
4. Porovnejte předešlé výsledky.
5. Pomocí metody lineární regrese odhadněte výsledky měření místo chybějících hodnot na 1. a 2. měření.
- 6.


vojic proměnných na listu **Korelace**.

ametrického korelačního koeficientu.

listu **Regrese**.

naphthalene	acenaphtylene	acenaphtene	fluorene	phenantrene
0.3350	0.0340	0.0490	1.3210	2.3890
0.1540	0.0240	0.0270	0.2030	4.3500
1.9570	0.6320	0.3630	3.1240	4.7480
1.3110	0.6070	0.2570	3.0960	4.5120
2.4230	0.7830	0.5000	4.5490	7.9960
0.9970	0.9060	0.2170	1.2570	2.5610
2.7270	0.2390	0.2200	2.1560	3.2000
0.1870	0.0500	0.0310	0.2830	4.5180
1.0250	0.2350	0.1860	4.3550	3.0000
0.5510	0.0820	0.0640	0.6330	3.7980
4.0990	0.7570	0.4300	3.9020	6.4680
0.8540	0.5080	0.1900	2.2080	7.2790
2.9900	3.4790	1.0650	6.0760	6.4480
2.2800	1.6620	0.7150	8.3740	6.1840
2.2670	0.7560	0.4500	7.6330	6.1760
0.6010	0.2080	0.2060	1.9190	4.9650
2.7400	0.7530	0.6760	4.3610	8.5370
4.2290	0.5820	0.6190	5.5250	9.9340
0.5080	0.0360	0.0450	1.7220	5.5920
2.6250	0.3670	0.5410	3.6010	7.0370
3.0080	0.7640	0.4700	3.4450	7.1940
2.4190	0.4930	0.5780	3.9640	7.6280
7.1160	1.5390	0.5700	3.5850	7.6150
2.5430	0.3660	0.3420	6.9150	9.2100
0.7540	0.0940	0.1200	2.5040	6.1430
0.9420	0.6260	0.3350	4.1310	7.9380
1.4370	0.1640	0.2110	1.8500	3.3610
0.5930	0.1620	0.1580	1.3690	2.8620
0.7570	0.0760	0.0860	1.6310	2.1060
0.1990	0.0630	0.1010	0.9280	2.6540
0.0970	0.0650	0.0400	0.6890	2.0100
0.1360	0.0050	0.0310	0.2530	0.4400
0.1130	0.0320	0.0630	0.6660	3.9210
0.1750	0.0080	0.0230	0.3770	5.9870
0.1550	0.0220	0.0370	0.5450	1.2450
1.4810	0.0260	0.0860	1.5170	3.4500
0.0790	0.0140	0.0420	0.4010	5.8190
0.1280	0.0390	0.0440	0.3350	5.9180
0.0790	0.0060	0.0430	0.3570	1.4480
0.0840	0.0120	0.0590	0.3990	5.1840
0.0790	0.0110	0.0240	0.2930	8.1760
0.1720	0.0180	0.0400	0.3640	0.9650
0.0480	0.0060	0.0170	0.1530	0.6860
0.1830	0.0140	0.0210	0.4020	5.2760
0.1370	0.0040	0.0160	0.2420	0.6490
0.1340	0.0100	0.0440	0.3890	5.1060

0.3020	0.1020	0.0590	0.9040	4.1270
0.2500	0.0450	0.0540	0.5620	2.5250
0.4320	0.0430	0.0910	0.5440	4.7710
1.1000	0.0990	0.1820	1.2640	2.5610
0.6930	0.0960	0.0730	1.0030	5.5790
0.5900	0.2100	0.1670	1.8900	4.4920
0.9220	0.2550	0.4560	2.5320	7.8460
0.2700	0.0450	0.0410	0.6890	2.5750
2.0440	0.2530	0.2730	3.0620	6.9810
1.7580	0.1740	0.2980	3.6910	10.2970
1.3610	0.5320	0.2380	5.7520	8.8520
0.8100	0.1220	0.1170	2.0210	10.5730
2.4600	1.7210	0.4070	6.6220	5.0900
0.9110	0.3190	0.2200	4.0290	2.1240
0.2930	0.2960	0.0960	1.2170	4.7560
4.5740	1.9910	0.8430	7.9400	11.9780
3.9740	2.7820	0.9040	9.3220	4.7040
11.2670	12.7290	1.6480	10.8740	6.9610
1.3600	1.8350	0.7030	8.6810	5.4140
1.9060	0.9140	0.5800	5.9130	10.9880
0.8220	0.2880	0.2400	3.8040	8.4070
1.2230	0.3850	0.3050	5.3710	12.0130
2.0030	0.9190	0.5430	4.3040	9.1220
10.9690	3.0550	1.8250	12.8100	4.7520
2.4650	1.2830	0.7060	5.8540	5.4570
23.3830	1.9420	1.5770	11.1090	5.3020
3.8770	1.9050	1.0530	11.2770	10.8130
13.5230	2.8030	1.6620	12.1940	9.2130
10.1280	0.4030	0.4970	4.1350	7.3550
2.0030	0.6970	0.3730	3.2490	6.6860
0.4660	0.0390	0.0310	1.6020	3.6670
1.6890	1.0770	0.3920	4.9600	6.3660
0.0480	0.0810	0.0250	0.9160	3.1690
0.4860	0.0490	0.0410	1.0394	3.3410
0.1970	0.0780	0.0560	1.2073	4.5780
1.4880	0.0840	0.1290	1.6624	2.0460
0.3400	0.0610	0.0690	1.3039	2.9600
0.2220	0.0410	0.0540	1.1926	2.1270
0.0190	0.0250	0.0100	0.8382	1.0650
0.3610	0.0680	0.0680	1.2909	5.8900
0.2150	0.0330	0.0590	1.2389	6.7070
0.3040	0.0340	0.0700	1.3225	3.8830
2.7230	0.2360	0.1400	1.5560	2.2880
0.3130	0.0220	0.0470	1.1215	4.3790
0.2250	0.0340	0.0300	0.9828	2.0420
0.8170	0.0650	0.0510	1.0771	2.8260
0.7240	0.1110	0.1410	1.8722	6.6250
1.1410	0.1130	0.1390	1.7947	3.6890
0.2530	0.0310	0.1030	1.6200	1.7470
0.3580	0.0210	0.0650	1.2732	2.8000



0.1670	0.0220	0.0410	1.0897	3.6910
0.0590	0.0100	0.0130	0.8615	0.9290
0.4000	0.0290	0.0320	0.9762	3.4910
0.1370	0.0460	0.0440	1.1161	0.1170

Spearmanova korelace:


anthracene
 2.5437
 4.2336
 4.6400
 4.2876
 8.1435
 2.5096
 2.9186
 4.6902
 2.7366
 3.8726
 6.6419
 7.3421
 6.2560
 6.3339
 6.0043
 4.6709
 8.3418
 9.9432
 5.3703
 7.1314
 7.1471
 7.4945
 7.5255
 9.0396
 5.9770
 7.8596
 3.4772
 2.7535
 1.8223
 2.6965
 1.9878
 0.4709
 3.8012
 5.7704
 1.3499
 3.1572
 5.9061
 5.6190
 1.5260
 4.9185
 8.0057
 0.8941
 3.5614
 5.4001
 0.7229
 4.8916

	naphthalene	acenaphtylene	acenaphtene
naphthalene	1.000000	0.880256	0.914542
acenaphtylene	0.880256	1.000000	0.926443
acenaphtene	0.914542	0.926443	1.000000
fluorene	0.882028	0.907211	0.908332
phenantrene	0.562378	0.581610	0.628812
anthracene	0.546174	0.566606	0.612788

	phenantrene	anthracene
phenantrene	1.000000	0.992978
anthracene	0.992978	1.000000

3.9399
2.6733
4.6414
2.4106
5.6582
4.5860
8.0146
2.3160
6.8887
10.1000
8.5854
10.3497
4.9459
2.2745
4.5837
12.0445
4.5519
6.7372
5.2876
11.0227
8.1593
12.0797
8.8949
4.5892
5.3309
5.2189
10.6621
9.2928
7.3913
6.6142
3.6793
6.2823
3.0933
3.2206
4.4091
1.9913
2.6965
1.9638
1.0037
5.7813
6.8846
3.7906
2.4700
4.2190
1.8162
2.5966
6.5933
3.5271
1.8281
2.9160

3.4409
0.6640
3.5313
0.0712



fluorene	phenantrene	anthracene
0.882028	0.562378	0.546174
0.907211	0.581610	0.566606
0.908332	0.628812	0.612788
1.000000	0.619376	0.599932
0.619376	1.000000	0.991470
0.599932	0.991470	1.000000

PCB 153	PCB 180
4.27	5.10
2.56	4.72
5.27	5.64
5.26	5.75
5.27	5.64
5.03	6.28
3.77	5.03
4.58	5.37
5.30	5.67
4.52	5.41
5.16	5.57
4.95	5.46
5.51	5.82
5.21	5.74
4.96	5.53
5.19	6.37
4.61	5.33
4.58	5.45
3.51	4.97
3.79	5.13
4.23	5.14
4.23	5.24
4.13	5.26
5.58	5.97
4.99	5.49
4.68	5.43
4.69	5.49
3.90	5.13
3.69	5.00
3.85	5.00
3.46	4.81
1.66	4.80
2.78	5.01
1.58	4.71
2.27	4.68
2.68	4.72
0.70	4.66
1.58	4.88
1.04	4.76
2.14	4.67
1.17	4.56
1.39	4.82
1.66	4.73
2.35	4.80
3.46	5.05
3.20	5.04

3.27	4.88
2.88	4.82
4.03	5.09
3.89	5.07
3.69	5.11
3.93	5.13
3.00	4.78
4.64	5.32
5.01	5.51
5.15	5.73
5.61	5.94
5.35	5.84
5.05	5.63
4.92	5.51
4.64	5.31
5.64	6.00
5.96	6.21
5.19	5.36
5.79	6.08
5.29	5.80
4.86	5.54
5.45	5.77
5.12	5.66
5.16	5.34
5.07	5.54
5.67	6.79
5.83	6.13
5.13	5.34
5.08	5.62
4.51	5.33
4.54	5.23
5.70	6.82
5.53	5.88
4.66	5.47
5.06	5.62
4.48	5.40
3.59	4.83
1.66	4.86
2.56	4.58
4.10	4.99
3.10	5.01
2.42	4.80
4.96	5.60
2.04	4.68
1.93	4.64
4.46	5.44
5.42	5.75
5.78	5.86
1.66	4.56
2.23	4.74

3.15	5.03
2.81	4.92
3.56	5.16

