

Выборочный коэффициент ранговой корреляции Кендалла

Два эксперта X и Y выставили оценки десяти образцам продукции завода. Найти выборочный коэффициент корреляции Кендалла τ_B между их оценками.¹

Задача L-45.1.

$$X = [45, 43, 41, 38, 35, 30, 28, 25, 22, 19]$$

$$Y = [53, 62, 49, 43, 25, 20, 12, 31, 37, 59]$$

$$\tau_B = ?$$

Задача L-45.2.

$$X = [46, 43, 40, 36, 34, 30, 28, 26, 22, 19]$$

$$Y = [53, 48, 43, 22, 28, 33, 11, 63, 59, 18]$$

$$\tau_B = ?$$

Задача L-45.3.

$$X = [47, 43, 39, 38, 33, 30, 27, 25, 22, 19]$$

$$Y = [57, 47, 44, 36, 63, 18, 29, 11, 23, 54]$$

$$\tau_B = ?$$

Задача L-45.4.

$$X = [45, 42, 39, 37, 35, 31, 28, 26, 23, 20]$$

$$Y = [53, 49, 44, 58, 23, 13, 35, 30, 62, 19]$$

$$\tau_B = ?$$

Задача L-45.5.

$$X = [46, 44, 39, 37, 35, 31, 27, 25, 23, 20]$$

$$Y = [57, 53, 44, 49, 29, 12, 37, 63, 24, 17]$$

$$\tau_B = ?$$

Задача L-45.6.

$$X = [47, 44, 39, 36, 34, 30, 27, 24, 22, 20]$$

$$Y = [57, 52, 43, 49, 63, 12, 17, 28, 23, 36]$$

$$\tau_B = ?$$

Задача L-45.7.

$$X = [45, 43, 40, 37, 35, 31, 28, 24, 21, 18]$$

$$Y = [52, 63, 48, 57, 31, 43, 25, 13, 34, 17]$$

$$\tau_B = ?$$

Задача L-45.8.

$$X = [47, 43, 41, 36, 34, 31, 29, 26, 22, 18]$$

$$Y = [59, 53, 42, 24, 63, 47, 18, 28, 12, 36]$$

$$\tau_B = ?$$

Задача L-45.9.

$$X = [45, 43, 41, 37, 34, 31, 28, 26, 22, 18]$$

$$Y = [54, 47, 59, 24, 63, 16, 42, 28, 12, 35]$$

$$\tau_B = ?$$

Задача L-45.10.

$$X = [47, 43, 41, 36, 34, 31, 27, 25, 23, 19]$$

$$Y = [58, 49, 53, 36, 23, 19, 12, 42, 63, 29]$$

$$\tau_B = ?$$

Задача L-45.11.

$$X = [47, 44, 39, 36, 35, 30, 27, 24, 22, 20]$$

$$Y = [57, 52, 43, 63, 29, 14, 16, 49, 23, 35]$$

$$\tau_B = ?$$

Задача L-45.12.

$$X = [46, 42, 40, 36, 35, 32, 29, 25, 22, 20]$$

$$Y = [59, 49, 52, 28, 24, 12, 16, 63, 34, 43]$$

$$\tau_B = ?$$

¹Гмурман В.Е. Руководство к решению задач по теории вероятностей и математической статистике. М.:1969. с. 204.

Задача L-45.13.

2

$$X = [46, 42, 40, 37, 33, 32, 29, 25, 22, 20]$$

$$Y = [53, 63, 58, 43, 30, 17, 11, 48, 23, 36]$$

$$\tau_B = ?$$

Задача L-45.14.

2

$$X = [46, 42, 41, 38, 35, 32, 28, 25, 22, 18]$$

$$Y = [54, 63, 58, 42, 25, 17, 36, 13, 48, 30]$$

$$\tau_B = ?$$

Задача L-45.15.

2

$$X = [46, 43, 41, 38, 35, 31, 29, 25, 22, 20]$$

$$Y = [53, 49, 30, 44, 23, 14, 64, 35, 59, 18]$$

$$\tau_B = ?$$

Задача L-45.16.

2

$$X = [46, 43, 41, 38, 35, 31, 29, 26, 22, 19]$$

$$Y = [54, 63, 59, 26, 34, 18, 13, 29, 48, 44]$$

$$\tau_B = ?$$

Задача L-45.17.

2

$$X = [46, 42, 40, 37, 33, 30, 27, 24, 21, 19]$$

$$Y = [58, 47, 43, 52, 34, 24, 30, 11, 62, 17]$$

$$\tau_B = ?$$

Задача L-45.18.

2

$$X = [45, 43, 41, 37, 33, 31, 27, 24, 21, 19]$$

$$Y = [53, 62, 47, 58, 28, 23, 18, 12, 36, 44]$$

$$\tau_B = ?$$

Задача L-45.19.

2

$$X = [45, 42, 40, 37, 34, 31, 28, 25, 22, 20]$$

$$Y = [52, 48, 43, 59, 23, 62, 13, 30, 34, 17]$$

$$\tau_B = ?$$

Задача L-45.20.

2

$$X = [46, 43, 41, 37, 34, 30, 28, 25, 21, 19]$$

$$Y = [52, 47, 59, 28, 24, 43, 63, 13, 36, 17]$$

$$\tau_B = ?$$

Задача L-45.21.

2

$$X = [46, 43, 41, 36, 34, 32, 28, 24, 21, 18]$$

$$Y = [58, 47, 42, 28, 52, 25, 36, 15, 12, 64]$$

$$\tau_B = ?$$

Задача L-45.22.

2

$$X = [47, 42, 40, 37, 35, 31, 28, 25, 22, 19]$$

$$Y = [59, 49, 62, 52, 24, 42, 12, 30, 35, 17]$$

$$\tau_B = ?$$

Задача L-45.23.

2

$$X = [47, 44, 41, 37, 33, 31, 29, 26, 22, 18]$$

$$Y = [59, 53, 64, 23, 30, 47, 17, 43, 12, 36]$$

$$\tau_B = ?$$

Задача L-45.24.

2

$$X = [46, 42, 40, 36, 34, 32, 28, 25, 22, 19]$$

$$Y = [58, 47, 53, 35, 23, 43, 16, 13, 63, 28]$$

$$\tau_B = ?$$

Задача L-45.25.

2

$$X = [46, 43, 40, 37, 35, 32, 29, 26, 22, 18]$$

$$Y = [58, 53, 63, 29, 24, 48, 18, 12, 43, 36]$$

$$\tau_B = ?$$

Задача L-45.26.

2

$$X = [47, 42, 40, 37, 34, 32, 29, 25, 21, 18]$$

$$Y = [59, 63, 43, 29, 25, 47, 52, 18, 13, 37]$$

$$\tau_B = ?$$

Задача L-45.27.

2

$$X = [46, 43, 41, 36, 33, 32, 28, 24, 21, 18]$$

$$Y = [58, 52, 63, 36, 43, 22, 29, 17, 10, 47]$$

$$\tau_B = ?$$

Задача L-45.28.

2

$$X = [47, 43, 41, 38, 34, 30, 27, 24, 21, 18]$$

$$Y = [58, 53, 48, 36, 31, 24, 18, 13, 43, 62]$$

$$\tau_B = ?$$

Ответы.**Выборочный коэффициент ранговой корреляции Кендалла**

06-Nov-18

№	$\sum R_i$	τ_B	y_i	R_i
1	29	0.289	3,1,4,5,8,9,10,7,6,2	7,8,6,5,2,1,0,0,0
2	27	0.200	3,4,5,8,7,6,10,1,2,9	7,6,5,2,2,2,0,2,1
3	31	0.378	2,4,5,6,1,9,7,10,8,3	8,6,5,4,5,1,2,0,0
4	29	0.289	3,4,5,2,8,10,6,7,1,9	7,6,5,5,2,0,2,1,1
5	33	0.467	2,3,5,4,7,10,6,1,8,9	8,7,5,5,3,0,2,2,1
6	31	0.378	2,3,5,4,1,10,9,7,8,6	8,7,5,5,5,0,0,1,0
7	37	0.644	3,1,4,2,7,5,8,10,6,9	7,8,6,6,3,4,2,0,1
8	33	0.467	2,3,5,8,1,4,9,7,10,6	8,7,5,2,5,4,1,1,0
9	31	0.378	3,4,2,8,1,9,5,7,10,6	7,6,6,2,5,1,3,1,0
10	29	0.289	2,4,3,6,8,9,10,5,1,7	8,6,6,4,2,1,0,1,1
11	31	0.378	2,3,5,1,7,10,9,4,8,6	8,7,5,6,3,0,0,2,0
12	27	0.200	2,4,3,7,8,10,9,1,6,5	8,6,6,3,2,0,0,2,0
13	33	0.467	3,1,2,5,7,9,10,4,8,6	7,8,7,5,3,1,0,2,0
14	33	0.467	3,1,2,5,8,9,6,10,4,7	7,8,7,5,2,1,2,0,1
15	27	0.200	3,4,7,5,8,10,1,6,2,9	7,6,3,4,2,0,3,1,1
16	29	0.289	3,1,2,8,6,9,10,7,4,5	7,8,7,2,3,1,0,0,1
17	33	0.467	2,4,5,3,6,8,7,10,1,9	8,6,5,5,4,2,2,0,1
18	33	0.467	3,1,4,2,7,8,9,10,6,5	7,8,6,6,3,2,1,0,0
19	31	0.378	3,4,5,2,8,1,10,7,6,9	7,6,5,5,2,4,0,1,1
20	31	0.378	3,4,2,7,8,5,1,10,6,9	7,6,6,3,2,3,3,0,1
21	31	0.378	2,4,5,7,3,8,6,9,10,1	8,6,5,3,4,2,2,1,0
22	35	0.556	2,4,1,3,8,5,10,7,6,9	8,6,7,6,2,4,0,1,1
23	33	0.467	2,3,1,8,7,4,9,5,10,6	8,7,7,2,2,4,1,2,0
24	31	0.378	2,4,3,6,8,5,9,10,1,7	8,6,6,4,2,3,1,0,1
25	33	0.467	2,3,1,7,8,4,9,10,5,6	8,7,7,3,2,4,1,0,1
26	33	0.467	2,1,5,7,8,4,3,9,10,6	8,8,5,3,2,3,3,1,0
27	35	0.556	2,3,1,6,5,8,7,9,10,4	8,7,7,4,4,2,2,1,0
28	31	0.378	2,3,4,6,7,8,9,10,5,1	8,7,6,4,3,2,1,0,0

L-45 файл 45L2-AnsA