

Ранговая корреляция Спирмена

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

Задача 44.1. *Азин Андрей*

$X = [45, 44, 40, 37, 34, 32, 29, 26, 23, 19]$

$Y = [54, 64, 30, 25, 34, 17, 11, 58, 43, 49]$

Задача 44.2. *Арефин Максим*

$X = [45, 42, 41, 38, 35, 32, 29, 25, 21, 18]$

$Y = [53, 48, 63, 25, 36, 17, 11, 30, 59, 42]$

Задача 44.3. *Булгакова Анна*

$X = [46, 42, 40, 38, 35, 30, 27, 25, 22, 18]$

$Y = [54, 48, 62, 42, 18, 23, 12, 58, 31, 35]$

Задача 44.4. *Быкова Евгения*

$X = [47, 43, 41, 37, 34, 32, 29, 25, 22, 19]$

$Y = [59, 42, 31, 25, 52, 18, 11, 37, 49, 63]$

Задача 44.5. *Викторов Александр*

$X = [46, 42, 41, 37, 35, 31, 27, 24, 22, 20]$

$Y = [58, 49, 53, 43, 25, 12, 16, 29, 37, 62]$

Задача 44.6. *Вольнов Кирилл*

$X = [46, 44, 39, 37, 33, 32, 28, 24, 22, 19]$

$Y = [57, 53, 48, 64, 30, 23, 12, 42, 35, 15]$

Задача 44.7. *Гречко Даниил*

$X = [47, 43, 41, 38, 33, 32, 28, 24, 22, 19]$

$Y = [58, 35, 53, 42, 24, 17, 12, 31, 48, 63]$

Задача 44.8. *Ермаков Данила*

$X = [46, 42, 41, 38, 35, 32, 28, 24, 22, 19]$

$Y = [53, 63, 58, 31, 25, 11, 43, 35, 49, 19]$

Задача 44.9. *Захаренков Иван*

$X = [46, 42, 40, 37, 35, 32, 28, 24, 22, 20]$

$Y = [58, 49, 53, 29, 36, 12, 17, 63, 43, 25]$

Задача 44.10. *Малагин Даниил*

$X = [46, 43, 40, 37, 35, 30, 28, 25, 21, 19]$

$Y = [59, 52, 48, 44, 25, 19, 11, 29, 36, 63]$

Задача 44.11. *Мартынов Антон*

$X = [46, 43, 40, 37, 35, 31, 29, 26, 23, 19]$

$Y = [58, 49, 31, 25, 34, 12, 43, 63, 54, 19]$

Задача 44.12. *Махмудов Валентин*

$X = [46, 42, 40, 36, 33, 31, 29, 26, 23, 19]$

$Y = [59, 48, 63, 43, 22, 18, 12, 28, 35, 53]$

Задача 44.13. *Мелешко Павел*

$X = [46, 43, 41, 37, 34, 31, 29, 26, 23, 20]$

$Y = [59, 54, 49, 25, 36, 17, 12, 31, 43, 64]$

Задача 44.14. *Мохамед Али*

$X = [47, 43, 41, 37, 33, 32, 29, 26, 22, 19]$

$Y = [59, 53, 44, 24, 18, 47, 63, 10, 30, 36]$

¹Гмурман В.Е. Руководство к решению задач по теории вероятностей и математической статистике. М.:1969. с. 202.

Задача 44.15. *Сионов Павел*

$X = [46, 44, 39, 38, 34, 31, 28, 25, 22, 18]$

$Y = [54, 64, 30, 57, 17, 24, 48, 13, 35, 42]$

Задача 44.16. *Соколов Константин*

$X = [47, 44, 40, 37, 35, 30, 28, 25, 22, 19]$

$Y = [59, 53, 63, 31, 23, 12, 18, 37, 43, 49]$

Задача 44.17. *Хохлов Александр*

$X = [47, 43, 41, 37, 35, 32, 29, 26, 23, 20]$

$Y = [59, 64, 49, 23, 36, 11, 43, 29, 54, 18]$

Задача 44.18. *Новиков Станислав*

$X = [46, 42, 41, 37, 34, 31, 28, 25, 22, 19]$

$Y = [54, 47, 36, 63, 24, 16, 12, 30, 58, 44]$