

U-критерий Манна - Уитни

Протестировали образцы деталей, произведенных в двух разных фирмах (с, b). Получено число деталей, прошедших проверку на качество в различных испытаниях. Можно ли утверждать, детали одной фирмы качественней другой? Уровень значимости $\alpha = 0,05$.¹

Задача 13.1. *Абалимов Александр*

$c = [20, 15, 36, 31, 23]$

$b = [14, 10, 17, 22, 27, 39, 37]$

Задача 13.2. *Антощенко Анастасия*

$c = [23, 22, 18, 30, 27]$

$b = [14, 11, 10, 28, 31, 38, 36]$

Задача 13.3. *Безруков Игорь*

$c = [25, 20, 41, 31, 13]$

$b = [16, 12, 10, 23, 29, 45, 36]$

Задача 13.4. *Безъязыков Александр*

$c = [21, 17, 25, 30, 26]$

$b = [11, 10, 15, 28, 34, 32, 31]$

Задача 13.5. *Габбасова Камилла*

$c = [22, 18, 34, 31, 26]$

$b = [14, 10, 17, 30, 32, 37, 35]$

Задача 13.6. *Дворский Андрей*

$c = [22, 16, 28, 36, 32]$

$b = [20, 13, 10, 23, 40, 49, 44]$

Задача 13.7. *Демидов Александр*

$c = [26, 22, 14, 40, 33]$

$b = [13, 10, 18, 31, 38, 44, 42]$

Задача 13.8. *Дробчик Георгий*

$c = [20, 18, 25, 22, 14]$

$b = [12, 10, 17, 19, 29, 27, 23]$

Задача 13.9. *Кирпин Валерий*

$c = [19, 17, 26, 29, 28]$

$b = [23, 13, 10, 34, 45, 40, 38]$

Задача 13.10. *Королева Татьяна*

$c = [19, 17, 22, 34, 32]$

$b = [14, 11, 10, 20, 27, 36, 33]$

Задача 13.11. *Кузнецов Степан*

$c = [23, 21, 17, 30, 28]$

$b = [14, 13, 10, 22, 29, 39, 34]$

Задача 13.12. *Майков Дмитрий*

$c = [16, 15, 22, 30, 26]$

$b = [13, 10, 14, 17, 28, 35, 34]$

¹Просветов Г.И. Теория вероятностей и матем.статистика. М.:Алфа-Пресс. 2015. с. 186

Задача 13.13. *Нессанс Эдгар Матъяс*

$$c = [23, 20, 15, 32, 29]$$

$$b = [13, 10, 16, 21, 37, 31, 25]$$

Задача 13.14.

Ромич Антон

$$c = [23, 17, 39, 34, 28]$$

$$b = [15, 14, 10, 19, 33, 44, 40]$$

Задача 13.15. *Солдатов Александр*

$$c = [20, 17, 21, 36, 30]$$

$$b = [25, 13, 10, 31, 45, 44, 40]$$

Задача 13.16.

Толмачёв Никита

$$c = [18, 17, 22, 30, 26]$$

$$b = [13, 10, 16, 24, 32, 37, 33]$$

Задача 13.17. *Толушкин Ростислав*

$$c = [22, 17, 33, 28, 24]$$

$$b = [12, 10, 14, 20, 38, 34, 29]$$

Задача 13.18.

Трифонов Дмитрий

$$c = [19, 15, 21, 34, 30]$$

$$b = [13, 10, 25, 38, 48, 47, 42]$$

Задача 13.19.

Чумаков Иван

$$c = [16, 15, 29, 24, 20]$$

$$b = [19, 14, 10, 31, 32, 36, 34]$$

Задача 13.20.

Шибанов Сергей

$$c = [22, 20, 29, 27, 26]$$

$$b = [14, 10, 18, 25, 37, 33, 31]$$