Задача 1

[[0.39817235 0.19142569 0.69402543 0.77850158]

[0.41642073 0.09019051 0.31014513 0.90741775]

[0.88126819 0.89972271 0.52854702 0.08652065]]

[1.69586127 1.18133891 1.53271758 1.77243998]

3

1.7724399840121339

0.9074177537954432

Задача 2

[0.51553126 0.43104353 0.59901464]

2

0.5990146412823261

0.89972270813091

Задача 3

[1.69586127 1.18133891 1.53271758 1.77243998]

3

0.08652064672061044

Задача 4

[0.51553126 0.43104353 0.59901464]

0.43104353056935885

Process finished with exit code 0

Задача 5

[[0.45597834 0.22105867 0.02121783 0.31769226]

[0.67581349 0.31894808 0.73487476 0.63433438]

[0.67375706 0.37802514 0.93415421 0.42097908]]

[0.60184963 0.30601063 0.5634156 0.45766857]

[0.25398678 0.59099268 0.60172887]

[[0.60184963 0.30601063 0.5634156 0.45766857 0. ]

[0. 0. 0. 0. 0.25398678]

[0. 0. 0. 0. 0.59099268]

[0. 0. 0. 0. 0.60172887]]

Задача 6

5.786833301867071

[1.80554889 0.91803189 1.69024681 1.37300572]

[0.31200983 0.15864149 0.29208493 0.23726374]

[[0.31200983 0.15864149 0.29208493 0.23726374 0. ]

[0. 0. 0. 0. 0. ]

[0. 0. 0. 0. 0. ]

[0. 0. 0. 0. 0. ]]

Задача 7

5.786833301867071

[1.0159471 2.36397071 2.40691549]

[0.17556184 0.40850852 0.41592964]

[[0. 0. 0. 0. 0.31200983]

[0. 0. 0. 0. 0.15864149]

[0. 0. 0. 0. 0.29208493]]

Задача 8

[[0 1 0 0]

[0 0 0 0]

[0 0 0 1]]

[[0 1 0 0 0]

[0 0 0 0 1]

[0 0 0 0 0]

[0 0 0 0 1]]

Process finished with exit code 0

Задача 10

[[0.16340168 0.8485136 0.9833728 0.7461211 ]

[0.39538145 0.73656014 0.02211562 0.9142772 ]

[0.30530905 0.35652415 0.4355553 0.40494145]]

[0.9833728 0.02211562 0.4355553 ]

[[1.60684772e-01 8.34405194e-01 9.67022072e-01 7.33715194e-01]

[8.74410705e-03 1.62894862e-02 4.89100766e-04 2.02198097e-02]

[1.32978975e-01 1.55285983e-01 1.89708418e-01 1.76374393e-01]]

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Задача 11

[[0.29366375 0.98969118 1.15673049 0.91008959]

[0.14172308 0.17157547 0.19019752 0.1965942 ]

[0.26595795 0.31057197 0.37941684 0.35274879]]

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Задача 12

[[0.25387396 0.85559358 1. 0.78677756]

[0.72089146 0.87273921 0.9674625 1. ]

[0.70096508 0.81855083 1. 0.92971306]]

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Задача 13

[0.72089146 0.87273921 1. 1. ]

[[0.35216669 0.98035423 1. 0.78677756]

[1. 1. 0.9674625 1. ]

[0.97235869 0.93791 1. 0.92971306]]

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Задача 14

Максимальный элемент= 1.0

[[0.35216669 0.98035423 1. 0.78677756]

[1. 1. 0.9674625 1. ]

[0.97235869 0.93791 1. 0.92971306]]

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Задача 15

[[ 0 1 2 3]

[ 4 5 6 7]

[ 8 9 10 11]]

['нет' 'нет' 'есть' 'нет']

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Задача 16

[[ 0 1 2 3]

[ 4 5 6 7]

[ 8 9 10 11]]

[array([[0, 1, 2, 3]]), array([[4, 5, 6, 7]]), array([[ 8, 9, 10, 11]])]

[[ 0 1 2 3]

[ 8 9 10 11]]

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Задача 17

[[0.30777436 0.64281396 0.27152383 0.91582921]

[0.38146614 0.99066184 0.54330309 0.62090728]

[0.31867099 0.73296763 0.92353533 0.32424279]]

[[0.30777436 0.64281396 0.27152383 0.91582921]

[0.38146614 0.99066184 0.54330309 0.62090728]

[0.31867099 0.73296763 0.92353533 0.32424279]

[0. 0. 0. 0. ]]

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Задача 18

[[0.89813584 0.17967587 0.76635563 0.14383426]

[0.42888869 0.70131818 0.12866505 0.68727086]

[0.24037836 0.20468333 0.02202316 0.57538998]

[0.41583167 0.19357788 0.24032243 0.5086767 ]]

[0.89813584 0.70131818 0.02202316 0.5086767 ]

Сумма элементов главной диагонали= 2.1301538884299855

[[0.41583167 0.17967587 0.76635563 0.5086767 ]

[0.42888869 0.20468333 0.57538998 0.68727086]

[0.24037836 0.68727086 0.12866505 0.57538998]

[0.14383426 0.19357788 0.24032243 0.14383426]]

Сумма элементов побочной диагонали= 0.8930143155025579

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Задача 19

[[0.5312866 0.68965557 0.65997272 0.45801662]

[0.78885754 0.65654073 0.51447581 0.12290592]

[0.85409823 0.69146194 0.95107755 0.64442871]

[0.3809021 0.51519656 0.91428976 0.10686086]]

Сумма элементов первой диагонали= 1.8485600787511998

Сумма элементов второй диагонали= 2.394609236257427

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Задача 20

[[0.44450142 0.76345674 0.13425689 0.12499418]

[0.77917592 0.96552847 0.67015448 0.2739293 ]

[0.66399087 0.37256263 0.29552305 0.70078765]

[0.99833873 0.04941001 0.21892691 0.51112144]]

[[0.12499418 0.13425689 0.76345674 0.44450142]

[0.2739293 0.67015448 0.96552847 0.77917592]

[0.70078765 0.29552305 0.37256263 0.66399087]

[0.51112144 0.21892691 0.04941001 0.99833873]]

Сумма элементов первой диагонали= 1.7637762339890537

Сумма элементов второй диагонали= 0.6188623613445072

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Задача 21

[[0.49708756 0.36635335 0.95519038 0.85132724]

[0.35634694 0.40860418 0.23865198 0.75499442]

[0.93104631 0.56964622 0.80854456 0.50796965]

[0.30191349 0.47663337 0.21178404 0.64090289]]

[0.36135015 0.4041491 0.35987684]

Новая матрица

[[0.49708756 0.36135015 0.95519038 0.85132724]

[0.36135015 0.40860418 0.4041491 0.75499442]

[0.93104631 0.4041491 0.80854456 0.35987684]

[0.30191349 0.47663337 0.35987684 0.64090289]]

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Задача 22

[[1 0 0 1]

[0 1 1 0]

[0 0 1 1]]

[2 2 2]

[0 0 0]

Новая матрица

[[1 0 0 1 0]

[0 1 1 0 0]

[0 0 1 1 0]]

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Задача 23

[[0.69848951 0.44762689 0.35390627 0.14457942]

[0.29951402 0.9271429 0.44453088 0.87342849]

[0.61268941 0.74497279 0.86738185 0.41095814]

[0.32598668 0.84188392 0.26506199 0.25866143]]

[[0.69848951 0.44762689 0.35390627 0.14457942]

[0. 0.9271429 0.44453088 0.87342849]

[0. 0. 0.86738185 0.41095814]

[0. 0. 0. 0.25866143]]

Сумма элементов выше главной диагонали= 5.426705769753405

[[0.14457942 0.35390627 0.44762689 0.69848951]

[0. 0.44453088 0.9271429 0.29951402]

[0. 0. 0.74497279 0.61268941]

[0. 0. 0. 0.32598668]]

Произведение элементов выше побочной диагонали= 0.00029384424988822933

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Задача 24

[[1 0 0 1]

[1 0 0 0]

[1 0 0 1]]

[[1 0]

[1 0]]

[[0 1]

[0 0]]

[[1 0]]

[[0 1]]

Сумма элементов первого массива= 2

Сумма элементов второго массива= 1

Сумма элементов третьего массива= 1

Сумма элементов четвертого массива= 1

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Задача 26

[[1 1 1 0]

[0 1 1 1]

[0 0 0 0]]

[[1 1]

[0 1]]

[[1 0]

[1 1]]

[[0 0]]

[[0 0]]

Среднее значение элементов первого массива= 0.75

Среднее значение элементов второго массива= 0.75

Среднее значение элементов третьего массива= 0.0

Среднее значение элементов четвертого массива= 0.0

Process finished with exit code 0